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American Chemical Service, Inc.

Griffith, IN

PRP Monthly Progress Reports

January 1999 - December 2001



MONTGOMERY WATSON

September 10, 1999

Ms. Kevin Adler
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, SR-J6
77 West Jackson Boulevard
Chicago, IL 60604-3590

Mr. Sean Grady
Project Manager
Indiana Department of Environmental
Management
P.O. Box 6015
Indianapolis, IN 46206-6015

Re: Progress Report – January 1999 through August 1999
ACS NPL Site

Dear Mr. Adler and Mr. Grady:

This progress report serves to reinitiate the monthly progress reports for the remedial design and remedial action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site), and covers the activities undertaken at the Site from January through August of 1999. Monthly progress reports were temporarily discontinued due to the frequent progress meetings with the Agency conducted during the Final Design. As discussed during our phone conversation on August 8, 1999, we are reinitiating the monthly schedule in anticipation of construction work to be conducted this fall. This progress report has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994.

Following is a summary of activities conducted during the last reporting period, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed (January 1999 through August 1999)

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating of the collected groundwater through the groundwater treatment plant (GWTP).
- Collected groundwater samples from site monitoring wells in March and June 1999.

- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.
- Designed barrier wall extraction system upgrades required for implementation of the Final Remedy.
- Investigated damage to the extraction pump in EW-13. The investigation indicated that a wax-like substance coated the pump. The pump could not be cleaned/repared. A new extraction well and pump will be installed in extraction trench 13 during implementation of the BWES upgrades performed as part of the Final Remedy.

Upcoming Work (September 1999 through December 1999)

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.
- Groundwater levels will be monitored and groundwater samples will be collected from site piezometers and monitoring wells in September and December 1999.
- Begin procurement/construction of the BWES upgrades (part of the Final Remedy). The schedule for this work is contingent upon the ACS RD/RA Group and the Agency reaching consensus on the terms of the Consent Decree.
- Begin installation of a separation barrier wall between the On-Site Area and Off-Site Areas (part of the Final Remedy). The schedule for this work is contingent upon the ACS RD/RA Group and the Agency reaching consensus on the terms of the Consent Decree.

GROUNDWATER TREATMENT PLANT

Work Completed (January 1999 through August 1999)

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- Monthly compliance samples were collected, analyzed, and reviewed each month. U.S. EPA was kept apprised of the results. The following is a short summary of the compliance sampling results:

January 27, 1999. No exceedences were observed.

February 26, 1999. An acetone exceedence was observed in the compliance sample (Result was 8,700 µg/L; limit is 6,800 µg/L). An investigation into possible causes for the exceedence was conducted and the results indicated that the exceedence was the result of laboratory contamination. U.S. EPA was notified of the exceedence and investigation results on April 26, 1999. No acetone exceedences have recurred since this sample.

March 29, 1999. No exceedences were observed.

April 21, 1999. An arsenic exceedence (Result was 90 µg/L; limit is 50 µg/L) and a pH exceedence (Result was 9.5 S.U.; limit is 6-9 S.U.) was observed. These exceedences and the planned course of corrective action are documented in Montgomery Watson's letter to the Agency dated June 8, 1999. As stated in the this letter, Montgomery Watson scheduled future sampling events so as not to directly follow a carbon change-out and readjusted the effluent pH control system for a target effluent pH of 7.0 S.U. instead of 7.5 S. U. These actions were designed to decrease the recurrence of arsenic and/or pH exceedences. No arsenic or pH exceedences have occurred since the April 21, 1999 sample.

May 24, 1999. A benzene exceedence (Result was 370 µg/L; limit is 5 µg/L) and a methylene chloride exceedence (Result was 8.5 µg/L; limit is 5 µg/L) was observed. These exceedences and the planned course of corrective action are documented in Montgomery Watson's letter to the Agency dated July 23, 1999. No benzene or methylene chloride exceedences have occurred since the May 24, 1999 sample.

June 29, 1999. A BOD₅ exceedence (Result was 92 µg/L; limit is 30 µg/L) was observed. Based on the carbon change-out schedule we believe that the BOD₅ concentration was not representative of the GWTP effluent. However, as stated in Montgomery Watson's letter to the Agency dated August 6, 1999, we conducted the following investigations:

1. We collected a BOD₅ sample from the GWTP influent during the August 1999 compliance sampling event.
 2. The effluent BOD₅ results from the August 1999 sampling event was reviewed.
 3. The 10,000-pound GAC units were changed-out and visually inspected on August 17, 1999. Corrosion was observed on the interior of both units. These units were repaired. Analytical results from samples collected following the repairs have not yet been received. Future results will be reviewed to determine if the exceedences are the result of the corrosion in the GAC units causing short-circuiting through the units.
- Groundwater levels from inside the barrier wall were collected from piezometers P-3, P-32, P-49, and P-96 on a weekly basis.

- Groundwater levels were collected from paired piezometers on March 22, 1999 and June 7, 1997 to monitor the hydraulic gradient along the barrier wall.
- Designed GWTP upgrade to accommodate the groundwater and in-situ soil vapor extraction condensate collection and treatment requirements of the Final Remedy.
- Procured the activated sludge plant component of the GWTP upgrades.
- Began procurement of the off-gas treatment system and tanks for the GWTP upgrades.
- Began construction of the GWTP upgrades in August 1999.
- Completed construction of the secondary containment system for the activated sludge plant and equalization/aeration tank in August 1999.

Upcoming Work (September 1999 through December 1999)

- Continue operation of the GWTP.
- Continue monitoring groundwater levels in piezometers P-3, P-32, P-49, and P-96.
- Monitor the hydraulic gradient along the barrier wall in September and November, in conjunction with the quarterly groundwater sampling.
- Continue procurement/construction of the GWTP upgrades. Major components include:
 - a) Procurement of equipment
 - b) Subgrade and concrete work for activated sludge plant, gravity phase separator tank, and building expansion foundation
 - c) Erection of activated sludge plant
 - d) Erection of gravity phase separator
 - e) Erection of treatment plant building expansion
 - f) Installation of catalytic oxidizer-scrubber unit
 - g) Installation of process pumps and piping
 - h) Installation of electrical and control lines and associated upgrades
 - i) Upgrade PLC
 - j) System start-up

The work mentioned above is anticipated to be completed in February 2000.

- Continue monthly GWTP compliance sampling and analysis.

REPORTS

Work Completed (January 1999 through August 1999)

- The September 1998 Groundwater Monitoring Report was submitted to the Agency on January 14, 1999.
- The Buried Drum Removal Plan was submitted to the Agency on January 26, 1999.
- Revised Conceptual Work Plan - 30% Remedial Design (RD) report was submitted to the Agency on February 11, 1999.
- The PCB-Impacted Soil Excavation Work Plan was submitted to the Agency on April 16, 1999.
- 95% RD report was submitted to the Agency on May 21, 1999.
- The Construction Quality Assurance Plan (CQAP) was submitted for Agency review on June 16, 1999.
- The Field Sampling Plan (FSP) Addendum was submitted for Agency review on June 16, 1999.
- The Contingency Plan was developed and submitted for Agency review on June 16, 1999.
- The Site Safety Plan (SSP) Addendum was developed and submitted for Agency review on June 16, 1999.
- The Performance Standard Verification Plan (PSVP) was submitted for Agency review on June 16, 1999.
- The December 1998 Groundwater Monitoring Report was submitted to the Agency on July 13, 1999.
- The March 1999 Groundwater Monitoring Report was submitted to the Agency on August 3, 1999.
- The Groundwater Treatment System Quarterly Monitoring Report, First Quarter 1999 was submitted to the Agency on August 16, 1999.
- The Groundwater Treatment System Quarterly Monitoring Report, Third and Fourth Quarters 1998 was submitted to the Agency on August 16, 1999.
- The Final RD Report for the Final Design was submitted to the Agency on August 20, 1999.

Upcoming Work (September 1999 through December 1999)

- The Groundwater Treatment System Quarterly Monitoring Report, Second Quarter 1999 will be submitted to the Agency in September 1999.
- The Groundwater Treatment System Quarterly Monitoring Report, Third Quarter 1999 will be submitted to the Agency in November 1999.
- The June 1999 Groundwater Monitoring Report will be submitted to the Agency in October 1999.
- The September 1999 Groundwater Monitoring Report will be submitted to the Agency in January 2000.

PILOT STUDIES

Work Completed (January 1999 through August 1999)

- Implementation of the Oxygen Release Compound (ORC) Pilot Study was conducted in the North Area in March 1999. ORC Pilot Study progress monitoring events were conducted in May, June, July, and August 1999.

Upcoming Work (September 1999 through December 1999)

- ORC Pilot Study progress monitoring events will be conducted monthly through April 2000.

OTHER ACTIVITIES

Work Completed (January 1999 through July 1999)

- Completed investigation of Y2K compliance of the groundwater treatment system. The investigation identified two pieces of equipment that may not be Y2K ready: the autodialer alarm and the man-machine interface (MMI). As corrective measures, we plan to test the autodialer, if possible, and upgrade the MMI during the GWTP upgrade. Also, because the system is dependent on power and natural gas from outside sources, the GWTP will be shut down from noon on Friday, December 30 1999 until 8:00 AM on Monday January 3, 1999.

Upcoming Work (September 1999 through December 1999)

- Remove PCB-impacted soil from the wetlands area. The schedule for this work is contingent upon the ACS RD/RA Group and the Agency reaching consensus on the terms of the Consent Decree.
- Remove buried drums located in the On-Site Area. The schedule for this work is contingent upon the ACS RD/RA Group and the Agency reaching consensus on the terms of the Consent Decree.

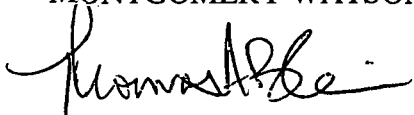
SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

- No problems with the schedule were encountered January 1999 through August 1999, and no problems or delays are anticipated in the near future. It should be noted that if the consensus on the terms of the Consent Decree is not completed by September 27, 1999, significant work on the BWES upgrade, separation barrier wall installation, and PCB-impacted soil removal in the wetlands may not be possible in 1999.

The next monthly report will be forwarded to U.S. EPA on or about October 10, 1999. If you have questions on the information provided in this monthly report, please contact me at (303) 938-8818.

Sincerely,

MONTGOMERY WATSON



For Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
P. Vagt
T. Blair
R. Adams

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October 8, 1999

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Re: Progress Report – September 1999
ACS NPL Site

Dear Mr. Adler and Mr. Grady:

This monthly progress report is for the remedial design and remedial action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). This progress report has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994, and covers the activities undertaken at the Site in September of 1999.

Following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in September 1999

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating of the collected groundwater through the groundwater treatment plant (GWTP).
- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.
- Collected groundwater samples from site monitoring wells from September 13-15, 1999.

Work Scheduled for October 1999 through January 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.
- Groundwater levels will be monitored and groundwater samples will be collected from site piezometers and monitoring wells in December 1999.
- Begin procurement/construction of the BWES upgrades (part of the Final Remedy). This work will be postponed until the ACS RD/RA Group and the Agency resolve the remaining issues on the Consent Decree and finalize that Decree.
- Begin installation of a separation barrier wall between the On-Site Area and Off-Site Areas (part of the Final Remedy). This work will be postponed until the ACS RD/RA Group and the Agency resolve the remaining issues on the Consent Decree and finalize that Decree.

GROUNDWATER TREATMENT PLANT

Work Conducted in September 1999

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- The monthly GWTP effluent compliance sample for September 1999 was collected, analyzed, and reviewed. No exceedences were observed.
- Continued monitoring groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a weekly basis.
- The secondary containment system for the activated sludge plant and equalization/aeration tanks was constructed.
- Completed subgrade work and constructed the concrete foundation for the activated sludge plant.
- Began erection of activated sludge plant structure.
- Reviewed and approved vendor shop drawings for the GWTP building expansion.
- Began procurement of tanks and process piping for the GWTP upgrade

Work Currently Scheduled for October 1999 through January 2000

- Continue operation of the GWTP.
- Continue monitoring groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a weekly basis.
- Monitor the hydraulic gradient along the barrier wall in December, in conjunction with the quarterly groundwater sampling.
- Continue procurement/construction of the GWTP upgrades. Completion is expected in February 2000. Major components include:
 - a) Procurement of equipment
 - b) Subgrade and concrete work for the gravity phase separator tank and building expansion foundation
 - c) Erection of the activated sludge plant
 - d) Erection of the gravity phase separator
 - e) Erection of the treatment plant building expansion
 - f) Installation of the catalytic oxidizer-scrubber unit
 - g) Installation of the process pumps and piping
 - h) Installation of the electrical and control lines and associated upgrades
 - i) Upgrade PLC
 - j) System start-up
- Continue monthly GWTP compliance sampling and analysis.

REPORTS

Work Completed during September 1999

- No reports were submitted in September 1999.

Reports Scheduled for October 1999 through January 2000

- The Groundwater Treatment System Quarterly Monitoring Report, Second Quarter 1999 will be submitted to the Agency in October 1999.
- The June 1999 Groundwater Monitoring Report will be submitted to the Agency in October 1999.
- The Groundwater Treatment System Quarterly Monitoring Report, Third Quarter 1999 will be submitted to the Agency in November 1999.

- The September 1999 Groundwater Monitoring Report will be submitted to the Agency in January 2000.

PILOT STUDIES

Work Conducted during September 1999

- Continued monitoring of ORC Pilot Study progress. Samples were collected on September 9 and 10, 1999.

Work Planned for October 1999 through January 2000

- ORC Pilot Study progress monitoring events will be conducted monthly through April 2000.

OTHER ACTIVITIES

Work Conducted in September 1999

- Due to Indiana Department of Environmental Management (IDEM) concern about the buried drums along the pipeline at the southern border of the Off-Site Area, the southern property boundary was surveyed on September 30, 1999 to determine location of the Site property boundary with respect to the buried drums.

Work Tentatively Scheduled for October 1999 through January 2000

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule is a preliminary estimate and it will be revised when the issues remaining on the Consent Decree are resolved and that Decree is finalized.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule is a preliminary estimate and it will be revised when the issues remaining on the Consent Decree are resolved and that Decree is finalized.

SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

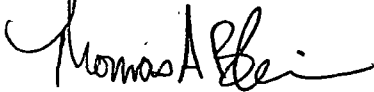
The draft schedule included with the 100% Final Remedial Design was based on a September 27, 1999 start date. That date has now passed and several issues remain to be resolved on the Consent Decree which will govern the Remedy. A new schedule will be

prepared and submitted for U. S. EPA approval when the remaining issues are resolved and the Consent Decree has been lodged with the court.

The next monthly report will be forwarded to U.S. EPA on or about November 10, 1999. If you have questions on the information provided in this monthly report, please contact me at (303) 938-8818.

Sincerely,

MONTGOMERY WATSON



For Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
P. Vagt
T. Blair
R. Adams

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MONTGOMERY WATSON

November 9, 1999

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Mr. Sean Grady
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Re: Progress Report – October 1999
ACS NPL Site

Dear Mr. Adler and Mr. Grady:

This monthly progress report is for the remedial design and remedial action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). This progress report has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994, and covers the activities undertaken at the Site in October of 1999.

Following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in October 1999

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating the collected groundwater through the groundwater treatment plant (GWTP).
- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.
- Continued monitoring groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a weekly basis.

Work Scheduled for November 1999 through January 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.

- Continue monitoring groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a weekly basis.
- Groundwater levels will be monitored and groundwater samples will be collected from site piezometers and monitoring wells during the week of November 8, 1999.
- Begin procurement/construction of the BWES upgrades (part of the Final Remedy). This work will be postponed until the ACS RD/RA Group and the Agencies resolve the remaining issues and finalize the Consent Decree.
- Begin installation of a separation barrier wall between the On-Site Area and Off-Site Areas (part of the Final Remedy). This work will be postponed until the ACS RD/RA Group and the Agencies resolve the remaining issues and finalize the Consent Decree.

GROUNDWATER TREATMENT PLANT

Work Conducted in October 1999

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- The monthly GWTP effluent compliance sample for October 1999 was collected on October 6, 1999, analyzed, and reviewed. No exceedences were observed.
- Completed erection of the activated sludge plant structure.
- Began painting/coating of activated sludge plant structure.
- Completed concrete foundations for the GWTP building expansion and gravity phase separator tank (T-101).
- Began installation of the GWTP influent header system.
- Continued procurement of tanks and process piping for the GWTP upgrade.

Work Currently Scheduled for November 1999 through January 2000

- Continue operation of the GWTP.
- Monitor the hydraulic gradient along the barrier wall in November, in conjunction with the quarterly groundwater sampling.
- Continue procurement/construction of the GWTP upgrades. Completion is expected in February 2000. Major components include:

- a) Procurement of equipment
 - b) Concrete work for the floor of the building expansion and exterior equipment pads
 - c) Installation of the activated sludge plant diffuser system
 - d) Erection of the gravity phase separator
 - e) Erection of the treatment plant building expansion
 - f) Installation of the catalytic oxidizer-scrubber unit
 - g) Installation of the process pumps and piping
 - h) Installation of the electrical and control lines and associated upgrades
 - i) Upgrade PLC
 - j) System start-up
- Continue monthly GWTP compliance sampling and analysis.

REPORTS

Work Completed during October 1999

- The Draft June 1999 Groundwater Monitoring Report was submitted to the ACS RD/RA committee for review.

Reports Scheduled for November 1999 through January 2000

- The Groundwater Treatment System Quarterly Monitoring Report, Second Quarter 1999 will be submitted to the Agency in November 1999.
- The June 1999 Groundwater Monitoring Report will be submitted to the Agency in November 1999.
- The Groundwater Treatment System Quarterly Monitoring Report, Third Quarter 1999 will be submitted to the Agency in January 1999.
- The September 1999 Groundwater Monitoring Report will be submitted to the Agency in January 2000.

PILOT STUDIES

Work Conducted during October 1999

- Continued monitoring of ORC Pilot Study progress. Samples were collected on October 13, 1999. We have begun to compile the collected data to identify any trends in the effectiveness of the ORC injections.

Work Planned for November 1999 through January 2000

- ORC Pilot Study progress monitoring events will be conducted monthly through April 2000 and we will continue to compile the collected data to identify any trends in the effectiveness of the ORC injections.

OTHER ACTIVITIES

Work Tentatively Scheduled for November 1999 through January 2000

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule is a preliminary estimate and it will be revised once the Consent Decree has been entered by the court.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule is a preliminary estimate and it will be revised once the Consent Decree has been entered by the court.

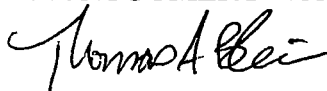
SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

The draft schedule included with the Final Remedial Design was based on a September 27, 1999 start date. That date has now passed and several issues remain to be resolved on the Consent Decree which will govern the Remedy. A new schedule will be prepared and submitted for U. S. EPA approval when the remaining issues are resolved and the Consent Decree has been entered by the court.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about December 10, 1999. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON


For Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
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T. Blair
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MONTGOMERY WATSON

December 9, 1999

Kevin Adler
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Sean Grady
Project Manager
Indiana Department of Environmental Management
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ACS NPL Site

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Following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in November 1999

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating the collected groundwater through the groundwater treatment plant (GWTP).

- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.
- Monitored groundwater levels in piezometers P-3, P-32, P-49, and P-96 on November 12, 1999.
- Groundwater levels in site piezometers and monitoring wells were monitored on November 8, 1999.
- Groundwater samples from site monitoring wells were collected between November 8 and 11, 1999, in accordance with the Agency-approved Long Term Groundwater Monitoring Program.

Work Scheduled for December 1999 through February 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.
- Continue monitoring groundwater levels in piezometers P-3, P-32, P-49, and P-96.

GROUNDWATER TREATMENT PLANT

Work Conducted in November 1999

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- The monthly GWTP effluent compliance sample for November 1999 was collected on November 3, 1999, analyzed, and reviewed. No exceedences were observed.
- Completed erection, sand blasting, and painting of the activated sludge plant structure and conducted a pre-construction completion inspection to identify punch-list items.
- Completed installation of the activated sludge plant diffuser system.
- Completed construction of the concrete equipment pad located at the south end of the treatment plant, the concrete foundation for the gravity phase separator tank, and the concrete floor of the building expansion.

- Began erection of the gravity phase separator tank (T-101).
- Continued procurement of tanks and process piping for the GWTP upgrade.
- Continued detailed design of the electrical and instrumentation and control (I&C) for the GWTP upgrade.

Work Currently Scheduled for December 1999 through February 2000

- Continue operation of the GWTP.
- Continue procurement/construction of the GWTP upgrades. Completion is expected in February 2000. Major components include:
 - a) Procurement of equipment
 - b) Concrete work for the activated sludge plant clarifier cone
 - c) Erection of the gravity phase separator
 - d) Erection of the treatment plant building expansion
 - e) Installation of the catalytic oxidizer-scrubber unit
 - f) Installation of the process pumps and piping
 - g) Installation of the electrical and control lines and associated upgrades
 - h) Upgrade PLC
 - i) System start-up
- Continue monthly GWTP compliance sampling and analysis.

REPORTS

Reports Completed during November 1999

- Submitted the June 1999 Groundwater Monitoring Report to U.S. EPA and IDEM.
- Submitted the Groundwater Treatment System Quarterly Monitoring Report, Second Quarter 1999, to U.S. EPA and IDEM.

Reports Scheduled for December 1999 through February 2000

- The Groundwater Treatment System Quarterly Monitoring Report, Third Quarter 1999 will be submitted to the Agency in December 1999.
- The September 1999 Groundwater Monitoring Report will be submitted to the Agency in January 2000.

- The Groundwater Treatment System Quarterly Monitoring Report, Fourth Quarter 1999 will be submitted to the Agency in February 2000.

PILOT STUDIES

Work Conducted during November 1999

- Continued monitoring of ORC Pilot Study progress. Samples were collected on November 13, 1999. We have started to compile the collected data to identify any trends in response to the ORC injections.

Work Planned for December 1999 through February 2000

- ORC Pilot Study progress monitoring events will be conducted monthly through May 2000 and we will continue to compile the collected data to identify any trends in the effectiveness of the ORC injections.

OTHER ACTIVITIES

Work Planned but not yet Scheduled

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised once the Consent Decree has been entered by the court.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised once the Consent Decree has been entered by the court.

SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

The draft schedule included with the Final Remedial Design was based on a September 27, 1999 start date. That date has now passed and several issues remain to be resolved on the Consent Decree which will govern the Remedy. A new schedule will be prepared and submitted for U. S. EPA approval when the remaining issues are resolved and the Consent Decree has been entered by the court.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about January 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON

for JVA

Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
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T. Blair
R. Adams

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January 11, ~~1999~~ 2000

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ACS NPL Site

Dear Mr. Adler and Mr. Grady:

This monthly progress report is for the remedial design and remedial action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). This progress report has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994, and covers the activities undertaken at the Site during December of 1999.

Following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in December 1999

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating the collected groundwater through the groundwater treatment plant (GWTP).

- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.
- Monitored groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a routine basis.

Work Scheduled for January 2000 through March 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.
- Continue monitoring groundwater levels in piezometers P-3, P-32, P-49, and P-96.
- Groundwater levels will be monitored and groundwater samples will be collected from site piezometers and monitoring wells in accordance with the Agency-approved Long Term Groundwater Monitoring Program in March 2000. This will be the First Quarter 2000 sampling event.

GROUNDWATER TREATMENT PLANT

Work Conducted in December 1999

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- The monthly GWTP effluent compliance sample for December 1999 was collected on December 1, 1999, analyzed, and reviewed. All sampling results were within the approved discharge limits for the plant.
- Began erection of the building expansion for the GWTP upgrade
- Continued erection of the gravity phase separator tank (T-101).
- Continued procurement of tanks and process piping for the GWTP upgrade.
- Completed construction of the concrete base for the clarifier within the activated sludge plant and the concrete landing for the access stairs of the activated sludge plant.

- Conducted an inspection to identify areas of the secondary containment system liner that required additional work or repair and completed the additional work.
- Completed backfilling the secondary containment system to the design elevation.

Work Currently Scheduled for January 2000 through March 2000

- Continue operation of the GWTP.
- Continue procurement/construction of the GWTP upgrades. Completion is expected in March 2000. Major components include:
 - a) Procurement of equipment
 - b) Erection of the equalization/aeration tank (T-102)
 - c) Completion of the gravity phase separator (T-101)
 - d) Completion of the treatment plant building expansion
 - e) Installation of the catalytic oxidizer-scrubber unit (ME-106)
 - f) Installation of the process pumps and piping
 - g) Installation of the electrical and control lines and associated upgrades
 - h) Upgrade PLC
 - i) System start-up
- Continue monthly GWTP compliance sampling and analysis.

REPORTS

Reports Completed during December 1999

- Submitted the Groundwater Treatment System Quarterly Monitoring Report, Third Quarter 1999, to U.S. EPA and IDEM.

Reports Scheduled for January 2000 through March 2000

- The Groundwater Treatment System Quarterly Monitoring Report, Fourth Quarter 1999 will be submitted to the Agency in February 2000.
- The September 1999 Groundwater Monitoring Report will be submitted to the Agency in January 2000.

PILOT STUDIES

Work Conducted during December 1999

- Continued monitoring of ORC Pilot Study progress. Samples were collected on December 8, 1999. We have started to compile the collected data to identify any trends in response to the ORC injections.

Work Planned for January 2000 through March 2000

- ORC Pilot Study progress monitoring events will be conducted monthly through May 2000 and we will continue to compile the collected data to identify any trends in the effectiveness of the ORC injections.

OTHER ACTIVITIES

Work Planned but not yet Scheduled

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised once the Consent Decree has been entered by the court.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised once the Consent Decree has been entered by the court.

SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

The draft schedule included with the Final Remedial Design was based on a September 27, 1999 start date. That date has now passed and several issues remain to be resolved on the Consent Decree which will govern the Remedy. A new schedule will be prepared and submitted for U. S. EPA approval when the remaining issues are resolved and the Consent Decree has been entered by the court.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about February 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



For Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
P. Vagt
T. Blair
R. Adams

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MONTGOMERY WATSON

February 16, 2000

Kevin Adler
Remedial Project Manager
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77 West Jackson Boulevard
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Sean Grady
Project Manager
Indiana Department of Environmental Management
P.O. Box 6015
Indianapolis, IN 46206-6015

Re: Progress Report – January 2000
ACS NPL Site

Dear Mr. Adler and Mr. Grady:

This monthly progress report is for the remedial design and remedial action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). This progress report has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994, and covers the activities undertaken at the Site during January of 2000

Following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in January 2000

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating the collected groundwater through the groundwater treatment plant (GWTP).

- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.
- Monitored groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a routine basis.

Work Scheduled for February 2000 through April 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.
- Continue monitoring groundwater levels in piezometers P-3, P-32, P-49, and P-96.
- Groundwater levels will be monitored and groundwater samples will be collected from site piezometers and monitoring wells in accordance with the Agency-approved Long Term Groundwater Monitoring Program in March 2000. This sampling event will be the First Quarter 2000 sampling event.

GROUNDWATER TREATMENT PLANT

Work Conducted in January 2000

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- The monthly GWTP effluent compliance sample for January 2000 was collected on January 5, 2000, analyzed, and reviewed. An estimated concentration of 0.11 µg/L of the PCB compound Aroclor-1252 was detected in the compliance sample. This result was above the effluent discharge limit of non-detection. This result and our proposed follow-up actions are documented in our letter to the U.S. EPA dated January 26, 2000. In accordance with the letter, a second compliance sample was collected on January 28, 2000 and analyzed for PCBs. No PCB compounds were detected in the January 28 sample indicating compliance with the effluent limits. We believe that the original result was a false positive for PCBs. Also, the annual sediment sample collection and analysis from the soil at one of the GWTP outfalls was scheduled for early February 2000.
- Continued erection of the building expansion for the GWTP upgrade.
- Continued erection of the gravity phase separator tank (T-101).

- Continued procurement of tanks and process piping for the GWTP upgrade.

Work Currently Scheduled for February 2000 through April 2000

- Continue operation of the GWTP.
- Continue procurement/construction of the GWTP upgrades. Completion is expected in March 2000. Major components include:
 - a) Procurement of equipment
 - b) Erection of the equalization/aeration tank (T-102)
 - c) Completion of the gravity phase separator (T-101)
 - d) Completion of the treatment plant building expansion
 - e) Installation of the catalytic oxidizer-scrubber unit (ME-106)
 - f) Installation of the process pumps and piping
 - g) Installation of the electrical and control lines and associated upgrades
 - h) Upgrade PLC
 - i) System start-up
- Continue monthly GWTP compliance sampling and analysis.
- Collect the annual sediment sample from one of the GWTP outfalls for PCB analysis in accordance with the PSVP.
- Begin revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

REPORTS

Reports Completed during January 2000

- No reports were submitted during January 2000. However, U.S. EPA comments to the June 1999 Groundwater Monitoring Report and the Second Quarter 1999 Groundwater Treatment System Quarterly Monitoring Report were received.

Reports Scheduled for February 2000 through April 2000

- The Groundwater Treatment System Quarterly Monitoring Report, Fourth Quarter 1999 will be submitted to the Agency in February 2000.
- The September 1999 Groundwater Monitoring Report will be submitted to the Agency in February 2000.
- Responses to the U.S. EPA's comments regarding the June 1999 Groundwater Monitoring Report and the Second Quarter 1999 Groundwater Treatment System

Quarterly Monitoring Report and the revised reports, if necessary, will be submitted to the Agency

PILOT STUDIES

Work Conducted during January 2000

- Continued monitoring of ORC Pilot Study progress. Samples were collected on January 16, 2000. We have continued to compile the collected data to identify responses to the ORC injections.

Work Planned for February 2000 through April 2000

- ORC Pilot Study progress monitoring events will be conducted monthly through May 2000. Data will be compiled to identify responses to the ORC injections.

OTHER ACTIVITIES

Work Planned but not yet Scheduled

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.

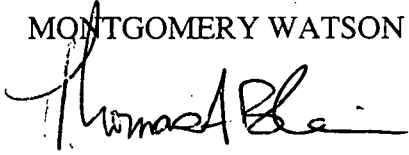
SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

The draft schedule included with the Final Remedial Design was based on a September 27, 1999 start date. That date has now passed and several issues remain to be resolved on the Consent Decree which will govern the Remedy. A new schedule will be prepared and submitted for U. S. EPA approval when the remaining issues are resolved and the Consent Decree has been entered by the court.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about March 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



For Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
P. Vagt
T. Blair
R. Adams

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MONTGOMERY WATSON

March 10, 2000

Kevin Adler
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Sean Grady
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Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – February 2000
ACS NPL Site

Dear Mr. Adler and Mr. Grady:

This monthly progress report is for the remedial design and remedial action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994, and covers the activities undertaken at the Site during February of 2000

Following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in February 2000

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating the collected groundwater through the groundwater treatment plant (GWTP).
- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.

- Monitored groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a routine basis.

Work Scheduled for March 2000 through May 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.
- Continue monitoring groundwater levels in piezometers P-3, P-32, P-49, and P-96.
- Groundwater levels will be monitored and groundwater samples will be collected from site piezometers and monitoring wells in accordance with the Agency-approved Long Term Groundwater Monitoring Program during the week of March 27, 2000. This sampling event will be the First Quarter 2000 sampling event and samples will be collected and analyzed for the full scan of analytical parameters.

GROUNDWATER TREATMENT PLANT

Work Conducted in February 2000

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- The monthly GWTP effluent compliance sample for February 2000 was collected on February 2, 2000, analyzed, and reviewed. A trichloroethene exceedence (sample result was 7 µg/L, limit is 5 µg/L) and a BOD exceedence (sample result was 33 mg/L, limit is 30 mg/L) were observed in the sample. We reported the exceedences to the U.S. EPA by telephone upon receiving the laboratory analytical results. An additional compliance sample was collected from the GWTP effluent on February 21 and analyzed for trichloroethene. Trichloroethene was not detected (detection limit was 0.5 µg/L) in the sample, indicating compliance with the effluent limits. An additional compliance sample was also collected from the GWTP effluent on February 25 and analyzed for BOD. BOD was detected the February 25 sample at a concentration of 44 mg/L. BOD will be sampled again as part of the March compliance sampling during the week of March 6, 2000.

We have identified two possible causes of these exceedences. The first is due to the intermittent operation of the aeration tank during late January because of construction workers working near and above the tank while erecting the building

expansion (as documented in our letter to the U.S. EPA dated February 21, 2000 regarding the trichloroethene result.)

Another potential cause of the exceedences is the 10,000-pound granular activated carbon (GAC) units. The carbon in these units was changed on January 10, 2000. When the effluent was sampled one month after change-out the trichloroethene and BOD concentrations were higher than normal. Upon receipt of the results of the February 25 sample for BOD, the carbon in both of the 1,500-pound GAC units was replaced (by a different supplier than the carbon for the 10,000-pound GACs) and the 10,000-pound GAC units were temporarily bypassed. The interior of the 10,000-pound GAC units was inspected by the vessel and carbon suppliers on March 6, 2000. The inspection indicated that there was a black slimy build-up in the interior of both units. We believe that this build-up could be biological growth and that it could effect the operation of the GAC units and/or contribute BOD to the effluent. The following corrective actions were implemented or will be implemented to remove the growth currently in the vessels and decrease the potential for future growth:

- a) The interior piping in both 10,000-lb GAC units was replaced with new piping and the interior surface of both units was pressure washed to remove the growth within the units.
 - b) The GAC header piping was flushed with pressurized water to remove slime from the piping.
 - c) The interior of the 1,500lb GACs will be visually inspected for slime.
 - d) The GWTP effluent piping will be sanitized to remove any slime that may be present in the piping.
 - e) The GACs will be sanitized and visually inspected for slime each time we change out the carbon.
 - f) The ultraviolet-oxidation (UV-OX) unit will be placed in the treatment train just prior to the GAC units. The ultraviolet lamp in the UV-OX unit will disinfect the GAC influent and assist in decreasing the potential for biological growth to enter and seed in the GAC units.
- A sediment sample from one of the GWTP outfalls was collected on February 3, 2000 and analyzed for PCBs in accordance with the PSVP. The analytical results from this sample and a comparison to the previous sample results will be contained in the GWTP compliance report for the first quarter of 2000.
 - Completed erection of the building expansion for the GWTP upgrade.
 - Continued erection of the gravity phase separator tank (T-101).
 - Continued procurement of mechanical and instrumentation and control contractors

- Began revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

Work Currently Scheduled for March 2000 through May 2000

- Continue operation of the GWTP.
- Continue procurement/construction of the GWTP upgrades. Completion is expected in May 2000. Major components include:
 - a) Procurement of equipment
 - b) Erection of the equalization/aeration tank (T-102)
 - c) Completion of the gravity phase separator (T-101)
 - d) Installation of the catalytic oxidizer-scrubber unit (ME-106)
 - e) Installation of the process pumps and piping
 - f) Installation of the electrical and control lines and associated upgrades
 - g) Upgrade the programmable logic controller
 - h) System start-up
- Continue monthly GWTP compliance sampling and analysis.
- Complete revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

REPORTS

Reports Completed during February 2000

- The September 1999 Groundwater Monitoring Report was submitted to the Agencies on February 25, 2000.
- Responses to the U.S. EPA's comments regarding the June 1999 Groundwater Monitoring Report and the Second Quarter 1999 Groundwater Treatment System Quarterly Monitoring Report were submitted to the Agencies on February 25, 2000. Changes and additions to the June 1999 Groundwater Monitoring Report resulting from these comments were also submitted to be included as an appendix to the original report.

Reports Scheduled for March 2000 through May 2000

- The Groundwater Treatment System Quarterly Monitoring Report, Fourth Quarter 1999 will be submitted to the Agency in March 2000.
- The November 1999 Groundwater Monitoring Report will be submitted to the Agency in April 2000.

PILOT STUDIES

Work Conducted during February 2000

- Continued monitoring of ORC Pilot Study progress. Samples were collected on February 22, 2000. We have continued to compile the collected data to identify responses to the ORC injections.

Work Planned for March 2000 through May 2000

- ORC Pilot Study progress monitoring events will be conducted monthly through May 2000. Data will be compiled to identify responses to the ORC injections.

OTHER ACTIVITIES

Work Planned but not yet Scheduled

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.

SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

The draft schedule included with the Final Remedial Design was based on a September 27, 1999 start date. A new schedule will be prepared and submitted for U. S. EPA approval when the remaining issues are resolved and the Consent Decree has been entered by the court.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about April 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
P. Vagt
T. Blair
R. Adams

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RECYCLED PAPER



MONTGOMERY WATSON

April 10, 2000

Kevin Adler
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Sean Grady
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Re: Progress Report – March 2000
ACS NPL Site

Dear Mr. Adler and Mr. Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994, and covers the activities undertaken at the Site during March of 2000.

Following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in March 2000

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating the collected groundwater through the groundwater treatment plant (GWTP).
- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.

- Monitored groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a routine basis.
- Groundwater levels in site piezometers and monitoring wells were monitored on March 27, 2000.
- Groundwater samples from site monitoring wells were collected between March 28 and 31, 2000, in accordance with the U.S. EPA-approved Long Term Groundwater Monitoring Program. This sampling event was the First Quarter 2000 sampling event and samples were collected and analyzed for the full scan of analytical parameters.

Work Scheduled for April 2000 through June 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.
- Continue monitoring groundwater levels in piezometers P-3, P-32, P-49, and P-96.
- Groundwater levels will be monitored and groundwater samples will be collected from site piezometers and monitoring wells in accordance with the U.S. EPA-approved Long Term Groundwater Monitoring Program in June 2000. This sampling event was the Second Quarter 2000 sampling event and samples were collected and analyzed for indicator parameters.

GROUNDWATER TREATMENT PLANT

Work Conducted in March 2000

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- As a result of the trichloroethene and BOD exceedences observed in the February 2000 effluent compliance sample, an inspection of the interior of the 10,000-pound granular activated carbon (GAC) units was conducted. (The trichloroethene sample result for the February 2000 sample was 7 µg/L, the limit is 5 µg/L, and the BOD sample result was 33 mg/L, limit is 30 mg/L.) The inspection was conducted on March 6, 2000 by Montgomery Watson, the activated carbon supplier, and the supplier of the GAC units. The inspection indicated that there was a soft black build-up in the interior of both units. The

build-up was present on the sidewalls, bottom, and top of lead 10,000-pound GAC unit and on the bottom of the second 10,000-pound GAC unit. The black build-up was also present on the slotted PVC "laterals" located at the bottom of both units. We believe that this build-up could be biological growth and that it could have effected the operation of the GAC units and/or contribute BOD to the effluent. A detailed discussion of this investigation and our corrective actions is contained in the progress report for the February 2000 activities dated March 10, 2000. The corrective actions discussed in that letter either have been incorporated or will be incorporated in the GWTP upgrades. The effluent compliance sample for March 2000 was collected on March 16, 2000. The analytical results indicate that no compounds were above the effluent limits and the effluent sample was in compliance.

- Completed erection of the gravity phase separator tank (T-101) and began hydrostatic testing of the tank.
- Submitted request for bid packages to mechanical subcontractors and electrical, instrumentation, and control subcontractors. A pre-bid meeting with the mechanical subcontractors was conducted at the Site on March 21, 2000, and a pre-bid meeting with the electrical, instrumentation, and control subcontractors was conducted at the Site on March 28, 2000.
- Continued revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

Work Currently Scheduled for April 2000 through June 2000

- Continue operation of the GWTP.
- Continue procurement/construction of the GWTP upgrades. Completion is expected in May 2000. Major components include:
 - a) Procurement of equipment
 - b) Erection of the equalization/aeration tank (T-102)
 - c) Installation of the catalytic oxidizer-scrubber unit (ME-106)
 - d) Installation of the process pumps and piping
 - e) Installation of the electrical and control lines and associated upgrades
 - f) Upgrade the programmable logic controller
 - g) System start-up
- Continue monthly GWTP compliance sampling and analysis.
- Complete revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

REPORTS

Reports Completed during March 2000

- The Groundwater Treatment System Quarterly Monitoring Report, Fourth Quarter 1999 was submitted to the Agency in March 2000.

Reports Scheduled for April 2000 through June 2000

- The November 1999 Groundwater Monitoring Report is scheduled to be submitted to the Agency in April 2000.
- The Groundwater Treatment System Quarterly Monitoring Report, First Quarter 2000 is scheduled to be submitted to the Agency in May 2000.

PILOT STUDIES

Work Conducted during March 2000

- Continued monitoring of ORC Pilot Study progress. Samples were collected on March 15, 2000. We have continued to compile the collected data to identify responses to the ORC injections.

Work Planned for April 2000 through June 2000

- ORC Pilot Study progress monitoring events will be conducted monthly through May 2000. Data will be compiled to identify responses to the ORC injections.

OTHER ACTIVITIES

Work Planned but not yet Scheduled

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.

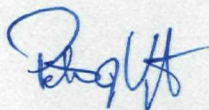
SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

The draft schedule included with the Final Remedial Design was based on a September 27, 1999 start date. A new schedule will be prepared and submitted for U. S. EPA approval when the remaining issues are resolved and the Consent Decree has been entered by the court.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about May 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
P. Vagt
T. Blair
R. Adams

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RECYCLED PAPER



MONTGOMERY WATSON

May 10, 2000

Kevin Adler
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77 West Jackson Boulevard
Chicago, IL 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – April 2000
ACS NPL Site

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994, and covers the activities undertaken at the Site during April of 2000.

Following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in April 2000

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating the collected groundwater through the groundwater treatment plant (GWTP).
- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.

- Monitored groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a routine basis.

Work Scheduled for May 2000 through July 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.
- Continue periodic monitoring of groundwater levels in piezometers P-3, P-32, P-49, and P-96.
- Groundwater levels will be monitored and groundwater samples will be collected from site piezometers and monitoring wells in accordance with the U.S. EPA-approved Long Term Groundwater Monitoring Program in June 2000. This sampling event is the Second Quarter 2000 sampling event and samples will be collected and analyzed for indicator parameters.

GROUNDWATER TREATMENT PLANT

Work Conducted in April 2000

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- Completed hydrostatic testing of the gravity phase separator tank (T-101).
- Conducted an on-site inspection of the catalytic oxidizer/scrubber to ensure that the system was delivered to the site as specified.
- Continued revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

Work Currently Scheduled for May 2000 through July 2000

- Continue operation of the GWTP.
- Start operation of the activated sludge plant. A construction completion inspection will be conducted by the vendor, tank erection company, and Montgomery Watson on May 4, 2000. Upon completion of unfinished items and repair of construction defects identified during the inspection, the activated sludge plant will be brought online to treat BWES water.

- Continue procurement/construction of the remaining GWTP upgrades. Completion is expected in August 2000. Major components include:
 - a) Procurement of equipment
 - b) Erection of the equalization/aeration tank (T-102)
 - c) Installation of the catalytic oxidizer-scrubber unit (ME-106)
 - d) Installation of the process pumps and piping
 - e) Installation of the electrical and control lines and associated upgrades
 - f) Upgrade the programmable logic controller
 - g) Complete system start-up
- Continue monthly GWTP compliance sampling and analysis.
- Complete revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

REPORTS

Reports Completed during April 2000

- No reports were submitted in April 2000

Reports Scheduled for May 2000 through July 2000

- The November 1999 Groundwater Monitoring Report is scheduled to be submitted to the Agency in May 2000.
- The Groundwater Treatment System Quarterly Monitoring Report, First Quarter 2000 is scheduled to be submitted to the Agency in May 2000.
- A report detailing ORC Pilot Study monitoring results and conclusions will be submitted in July 2000.

PILOT STUDIES

Work Conducted during April 2000

- Continued monitoring of ORC Pilot Study progress. Samples were collected on April 25, 2000. We have continued to compile the collected data to identify responses to the ORC injections.

Work Planned for May 2000 through July 2000

- Field monitoring for the ORC Pilot Study will be completed in May 2000. A report detailing and summarizing the pilot study results and conclusions will be developed for submittal in July 2000.

OTHER ACTIVITIES

Work Planned but not yet Scheduled

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.

SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

The draft schedule included with the Final Remedial Design was based on a September 27, 1999 start date. A new schedule will be prepared and submitted for U. S. EPA approval when the remaining issues are resolved and the Consent Decree has been entered by the court.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about June 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



FOR Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
P. Vagt
T. Blair
R. Adams

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MONTGOMERY WATSON

June 9, 2000

Kevin Adler
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, SR-6J
77 West Jackson Boulevard
Chicago, IL 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – May 2000
ACS NPL Site

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994, and covers the activities undertaken at the Site during May of 2000.

Following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in May 2000

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating the collected groundwater through the groundwater treatment plant (GWTP).
- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.

- Monitored groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a routine basis.

Work Scheduled for June 2000 through August 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.
- Continue periodic monitoring of groundwater levels in piezometers P-3, P-32, P-49, and P-96.
- Groundwater levels will be monitored and groundwater samples will be collected from site piezometers and monitoring wells in accordance with the U.S. EPA-approved Long Term Groundwater Monitoring Program during the week of June 26, 2000. This sampling event is the Second Quarter 2000 sampling event and samples will be collected from the monitoring wells and analyzed for indicator parameters.

GROUNDWATER TREATMENT PLANT

Work Conducted in May 2000

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- A final construction completion inspection was conducted by Smith & Loveless (the activated sludge plant vendor) and Montgomery Watson on May 4, 2000 to identify remaining construction deficiencies and obtain vendor approval for operation. The construction deficiencies were completed/repared and the activated sludge plant was approved for operation.
- Began treating groundwater collected by the BWES in the new activated sludge plant. Start-up and optimization procedures/monitoring were conducted and will continue to be conducted to maximize treatment capabilities and optimize operation of the mechanical components of the plant. The activated sludge plant is currently configured to operate in place of the fract tank that was previously used for equalization/aeration. The activated sludge plant will be operated in this configuration until the remaining components of the GWTP upgrade are complete.
- Continued revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

Work Currently Scheduled for June 2000 through August 2000

- Continue operation of the GWTP.
- Continue optimization and monitoring of the activated sludge plant.
- Continue procurement/construction of the remaining GWTP upgrades. Completion is expected in August 2000. Major components include:
 - a) Procurement of equipment
 - b) Erection of the equalization/aeration tank (T-102)
 - c) Installation of the catalytic oxidizer-scrubber unit (ME-106)
 - d) Installation of the process pumps and piping
 - e) Installation of the electrical and control lines and associated upgrades
 - f) Upgrade the programmable logic controller
 - g) Complete system start-up
- Continue monthly GWTP compliance sampling and analysis.
- Complete revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

REPORTS

Reports Completed during May 2000

- No reports were submitted in April 2000

Reports Scheduled for June 2000 through August 2000

- The November 1999 Groundwater Monitoring Report is scheduled to be submitted to the Agency in June 2000.
- The Groundwater Treatment System Quarterly Monitoring Report, First Quarter 2000 is scheduled to be submitted to the Agency in June 2000.
- A report detailing ORC Pilot Study monitoring results and conclusions will be submitted in July or August 2000.

PILOT STUDIES

Work Conducted during May 2000

- Continued monitoring of ORC Pilot Study progress. Samples were collected on June 5, 2000. This was that last monitoring round of the pilot study.

Work Planned for June 2000 through August 2000

- The last monitoring round was conducted on June 5, 2000. A report detailing and summarizing the pilot study results and conclusions will be developed for submittal in July or August 2000.

OTHER ACTIVITIES

Work Planned but not yet Scheduled

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.

SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

The draft schedule included with the Final Remedial Design was based on a September 27, 1999 start date. A new schedule will be prepared and submitted for U. S. EPA approval when the Consent Decree has been entered by the court.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about July 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
P. Vagt
T. Blair
R. Adams

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MONTGOMERY WATSON

July 10, 2000

Kevin Adler
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U.S. Environmental Protection Agency
Region V, SR-6J
77 West Jackson Boulevard
Chicago, IL 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – June 2000
ACS NPL Site

Dear Kevin and Sean:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994, and covers the activities undertaken at the Site during June of 2000.

Following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in June 2000

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating the collected groundwater through the groundwater treatment plant (GWTP).
- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.
- Monitored groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a routine basis.

- Groundwater levels in site piezometers and monitoring wells were monitored on June 26, 2000.
- Groundwater samples from several site monitoring wells were collected on June 27, 2000, in accordance with the U.S. EPA-approved Long Term Groundwater Monitoring Program. This sampling event was the Second Quarter 2000 sampling event and samples were collected and analyzed for indicator parameters

Work Scheduled for July 2000 through September 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- The PGCS piezometers will continue to be gauged, in accordance with the PSVP.
- Continue periodic monitoring of groundwater levels in piezometers P-3, P-32, P-49, and P-96.
- Groundwater levels will be monitored and groundwater samples will be collected from site piezometers and monitoring wells in September in accordance with the U.S. EPA-approved Long Term Groundwater Monitoring Program. This sampling event will be the Third Quarter 2000 sampling event and samples will be collected from all the monitoring wells in the groundwater monitoring network and analyzed for indicator parameters.

GROUNDWATER TREATMENT PLANT

Work Conducted in June 2000

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- Continued optimization procedures/monitoring of the activated sludge plant to maximize treatment capabilities and optimize operation of the mechanical components of the plant. The activated sludge plant is currently configured to operate in place of the fract tank that was previously used for equalization/aeration. The activated sludge plant will be operated in this configuration until the remaining components of the GWTP upgrade are complete.
- Continued revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

Work Currently Scheduled for July 2000 through September 2000

- Continue operation of the GWTP.

- Continue optimization and monitoring of the activated sludge plant.
- Continue procurement/construction of the remaining GWTP upgrades. This work is expected to be completed in August 2000. Major components include:
 - a) Procurement of equipment
 - b) Placement of the equalization/aeration tank (T-102)
 - c) Installation of the catalytic oxidizer-scrubber unit (ME-106)
 - d) Installation of the process pumps and piping
 - e) Installation of the electrical and control lines and associated upgrades
 - f) Upgrade the programmable logic controller
 - g) Complete system start-up
- Continue monthly GWTP compliance sampling and analysis.
- Complete revisions to the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

REPORTS

Reports Completed during June 2000

- The November 1999 Groundwater Monitoring Report was submitted to the Agency on June 5, 2000.
- The Groundwater Treatment System Quarterly Monitoring Report, First Quarter 2000 was submitted to the Agency on June 27, 2000.

Reports Scheduled for July 2000 through September 2000

- The March 2000 Groundwater Monitoring Report is scheduled to be submitted to the Agency in July 2000.
- The Groundwater Treatment System Quarterly Monitoring Report, Second Quarter 2000 is scheduled to be submitted to the Agency in August or September 2000.
- A report detailing Oxygen Release Compound (ORC_m) Pilot Study monitoring results and conclusions will be submitted in August 2000.

PILOT STUDIES

Work Conducted during June 2000

- Continued developing the ORC_m pilot study completion report.

Work Planned for July 2000 through September 2000

- Continue developing the ORC_m pilot study completion report for submittal in July or August 2000.

OTHER ACTIVITIES

Work Planned but not yet Scheduled

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.

SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

The draft schedule included with the Final Remedial Design was based on a September 27, 1999 start date. A new schedule will be prepared and submitted for U. S. EPA approval when the Consent Decree has been entered by the court.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about August 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



for
Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
P. Vagt
R. Adams

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MONTGOMERY WATSON

August 9, 2000

Kevin Adler
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, SR-6J
77 West Jackson Boulevard
Chicago, IL 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – July 2000
ACS NPL Site

Dear Kevin and Sean:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 48 of the Unilateral Administrative Order (UAO) effective October 4, 1994, and covers the activities undertaken at the Site during July 2000.

The following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next 90 days. The activities are grouped by component or work type.

GROUNDWATER COLLECTION SYSTEM

Work Completed in July 2000

- Continued gauging of the Perimeter Groundwater Containment System (PGCS) piezometers, in accordance with the Performance Standard Verification Plan (PSVP).
- Continued pumping from PGCS extraction trenches and treating the collected groundwater through the groundwater treatment plant (GWTP).
- Continued pumping from the Barrier Wall Extraction System (BWES) trenches and treating the extracted water through the GWTP.
- Monitored groundwater levels in piezometers P-3, P-32, P-49, and P-96 on a routine basis.

Work Scheduled for August 2000 through October 2000

- Continue to extract groundwater from the PGCS and BWES extraction trenches and operate the GWTP.
- Continue to gauge the PGCS piezometers, in accordance with the PSVP.
- Continue periodic monitoring of groundwater levels in piezometers P-3, P-32, P-49, and P-96.
- Monitor groundwater levels and collect groundwater samples from site piezometers and monitoring wells in September in accordance with the U.S. EPA-approved Long Term Groundwater Monitoring Program. This sampling event will be the Third Quarter 2000 sampling event and samples will be collected from all the monitoring wells in the groundwater monitoring network and analyzed for indicator parameters.

GROUNDWATER TREATMENT PLANT

Work Conducted in July 2000

- Continued operation of the GWTP to treat groundwater collected by the BWES and PGCS.
- Continued optimization procedures/monitoring of the activated sludge plant to maximize treatment capabilities and optimize operation of the mechanical components of the plant. The activated sludge plant is currently configured to operate in place of the fract tank that was previously used for equalization/aeration. The activated sludge plant will be operated in this configuration until the remaining components of the GWTP upgrade are complete.
- Began installation of the process piping and pumps required for completion of the GWTP upgrades.
- The equalization/aeration tank (T-102) was delivered to the Site and installed.
- Began installation of the catalytic oxidizer-scrubber unit (ME-106). This unit had previously been delivered to the site.

Work Currently Scheduled for August 2000 through October 2000

- Continue operation of the GWTP.
- Continue optimization and monitoring of the activated sludge plant.

- Continue procurement/construction of the remaining GWTP upgrades. Major components include:
 - a) Procurement of remaining equipment
 - b) Complete installation of the catalytic oxidizer-scrubber unit (ME-106)
 - c) Complete installation of the process pumps and piping
 - d) Installation of the electrical and control lines and associated upgrades
 - e) Upgrade the programmable logic controller
 - f) Complete system start-up
- Continue monthly GWTP compliance sampling and analysis.
- Revise the existing GWTP Operation and Maintenance Manual to incorporate the upgrades.

REPORTS

Reports Completed during July 2000

- No reports were submitted to the Agency in July 2000

Reports Scheduled for August 2000 through October 2000

- The March 2000 Groundwater Monitoring Report is scheduled to be submitted to the Agency in August 2000.
- The Groundwater Treatment System Quarterly Monitoring Report, Second Quarter 2000, is scheduled to be submitted to the Agency in August or September 2000.
- A report detailing Oxygen Release Compound (ORC_m) Pilot Study monitoring results and conclusions will be submitted in September 2000.

PILOT STUDIES

Work Conducted during July 2000

- Continued development of the ORC_m pilot study completion report.

Work Planned for August 2000 through October 2000

- Complete the ORC_m pilot study completion report for submittal in September 2000.

OTHER ACTIVITIES

Work Planned but not yet Scheduled

- Remove PCB-impacted soil from the wetlands area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.
- Remove buried drums located in the On-Site Area. While this work is included on the draft schedule for the Remedial Action, the schedule was a preliminary estimate and it will be revised when the Consent Decree has been entered by the court.

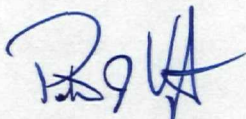
SCHEDULE, ACTUAL OR ANTICIPATED DELAYS OR PROBLEMS

The draft schedule included with the Final Remedial Design was based on a September 27, 1999 start date. A new schedule will be prepared and submitted for U. S. EPA approval when the Consent Decree has been entered by the court.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about September 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
M. Travers
R. Adams

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**MONTGOMERY WATSON
CONSTRUCTORS, INC.**

September 8, 2000

Kevin Adler
Remedial Project Manager
U.S. Environmental Protection Agency
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77 West Jackson Boulevard
Chicago, IL 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – August 2000
ACS NPL Site

Dear Kevin and Sean:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree lodged July 14, 2000, and covers the activities undertaken at the Site during August 2000.

The following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next few months. The activities are grouped in accordance with the groupings contained in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

As approved by U.S. EPA, Montgomery Watson began developing the Request for Bid (RFB) for submittal to potential subcontractors. The RFB is scheduled to be submitted in September 2000. During the August 24, 2000 meeting among U.S. EPA, IDEM, and Montgomery Watson, Montgomery Watson requested that the drums containing investigation derived waste (IDW) and the eight drums from along the barrier wall be included in the material to be consolidated. The request was orally approved during the meeting.

The fieldwork for the Spoils Pile Consolidation is tentatively scheduled to begin in October 2000.

Drum Removal in On-Site Containment Area (1.c.)

Montgomery Watson began developing the RFB for submittal to potential subcontractors.

The fieldwork for the Drum Removal is tentatively scheduled to begin in Winter 2000/2001.

PCB Sediment Excavation from Wetland (1.d.)

A request for bid (RFB) was developed for the PCB Sediment Excavation and submitted to potential subcontractors on August 9. The RFB was based on the Agency-Approved PCB Impacted Soils Excavation Work Plan (Montgomery Watson, 1999) and the Agency-Approved Site Restoration Plan and Wetland Delineation Supplemental Report (Environmental Planning Team, Chicago, 1990, 1999). A pre-bid site walk was conducted with the potential subcontractors on August 15, 2000.

Future activities associated with the PCB sediment removal include: selecting the final restoration option, selecting the subcontractor, and field mobilization during October 2000.

ORC[®] Treatment in the North Area (1.e.)

Montgomery Watson continued developing the summary report for the pilot study. This report will include a proposed plan for reapplication of ORC[®] in the North Area and continued quarterly monitoring of monitoring wells MW-48 and MW-49 for biological activity. It will also include a proposal for a pilot study to be conducted in the South Area.

The pilot study summary report and proposed plan is scheduled to be submitted to the Agencies in October 2000.

Groundwater Treatment Plant Upgrade (3.a.)

The groundwater treatment plant (GWTP) continued to treat water collected from the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES). An effluent compliance sample was collected on August 2, 2000. The analytical data indicated that no exceedences were observed in the compliance sample.

The mechanical and electrical/instrumentation subcontractors mobilized and began work in August, and installation of the Aerated Equalization Tank (T-101) was completed. The effluent of the GWTP has been temporarily rerouted to discharge in the wetlands south of the railroad tracks. The discharge was rerouted to assist in temporarily dewatering the wetland for the PCB sediment removal scheduled to begin October 2000.

Startup and optimization will continue in a staged manner (new equipment will be brought online as the piping and controls for the various components are completed). Major construction is expected to be completed in October 2000 and startup/optimization is expected to be completed in December 2000.

Barrier Wall Between On-Site and Off-Site Areas (4.a.)

The RFB was developed and submitted to potential subcontractors on August 16, 2000. A pre-bid site walk was conducted with the potential subcontractors on August 25, 2000.

Future activities associated with the installation of the separation barrier wall include: selecting the subcontractor, approving the subcontractor's installation plan, and field mobilization in October 2000.

Barrier Wall Extraction System Upgrades - Off-Site Area (3.b.)

Montgomery Watson began developing the RFB for submittal to potential subcontractors.

The RFB is scheduled to be submitted to potential subcontractors in early September 2000, and a pre-bid site walk is scheduled to be conducted with the potential subcontractors in mid-September 2000. Other activities associated with the installation of the BWES upgrades in the Off-Site Area include: selecting the subcontractor, approving the subcontractor's installation plan, and field mobilization in October 2000.

Project Management (6)

A meeting was conducted among the U.S. EPA, IDEM, and Montgomery Watson on August 24, 2000. The purpose of this meeting was to review the draft schedule and discuss implementation logistics and potential contingencies.

No unresolved delays were encountered during August that would result in a deviation from the draft schedule. The final schedule will be completed and submitted to the Agencies soon after the Consent Decree is entered by the court. When the schedule is finalized, a copy of the schedule and the percent complete for each task will be included in the monthly status reports.

OPERATION & MAINTENANCE ITEMS**Treatment System Monitoring (B.1, 2, 3, 4)**

Continued development of the Groundwater Treatment System Quarterly Monitoring Report, Second Quarter 2000. This report is scheduled to be submitted to the Agencies in September 2000.

Groundwater, Air Quality, Wetland, and Residential Well Monitoring (B.7.)

The Third Quarter 2000 sampling event is scheduled for the week of September 18, 2000. Samples will be collected from all the monitoring wells in the groundwater monitoring network and analyzed for indicator parameters. Groundwater levels and groundwater samples from site piezometers and monitoring wells will be collected in accordance with the U.S. EPA-approved Long Term Groundwater Monitoring Program.

Residential Well Water Quality Monitoring (B.8.)

The residential wells adjacent to the ACS Site will be sampled during the Third Quarter 2000 groundwater sampling event scheduled for the week of September 18, 2000. Samples will be collected from five residential wells and analyzed for full scan.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about October 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
M. Travers
R. Adams

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MONTGOMERY WATSON

October 9, 2000

Kevin Adler
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Sean Grady
Project Manager
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100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – September 2000
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree lodged July 14, 2000, and covers the activities undertaken at the Site during September 2000.

The following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next several months. The activities are grouped in accordance with Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

As approved by U.S. EPA, Montgomery Watson began developing the Request for Bid (RFB) for submittal to potential subcontractors. The RFB is scheduled to be submitted in Winter 2000/Spring 2001.

The fieldwork for the Spoils Pile Consolidation is tentatively scheduled to begin in Spring 2001.

Drum Removal in On-Site Containment Area (1.c.)

Montgomery Watson continued developing the RFB for submittal to potential subcontractors.

The fieldwork for the Drum Removal is tentatively scheduled to begin in Winter 2000/2001.

PCB Sediment Excavation from Wetland (1.d.)

An RFB for the PCB Sediment Excavation was submitted to potential subcontractors, and a pre-bid site walk was conducted during August 2000. The subcontractor selection process is continuing with two of the bidders.

The final restoration plan for the excavated area has been selected. Open water will cover the area to a depth of four feet. Once the subcontractor is chosen, field mobilization is scheduled to begin during late October or early November 2000.

ORC[®] Treatment in the North Area (1.e.)

Montgomery Watson continued developing the summary report for the pilot study. This report will include a proposed plan for reapplication of ORC[®] in the North Area and continued quarterly monitoring of monitoring wells MW-48 and MW-49 for biological activity. It will also include a proposal for a pilot study to be conducted in the South Area.

The pilot study summary report and proposed plan is scheduled to be submitted to the Agencies in October 2000.

Groundwater Treatment Plant Upgrade (3.a.)

The mechanical and electrical/instrumentation subcontractors continued to install piping, conduit, and instrumentation. Startup and optimization will continue in a staged manner (new equipment will be brought online as the piping and controls for the various components are completed). Major construction is expected to be completed in late October 2000 and startup/optimization is expected to be completed in December 2000.

Barrier Wall Between On-Site and Off-Site Areas (4.a.)

The RFB was submitted to potential subcontractors and a pre-bid site walk was conducted during August 2000. The subcontractor selection process is continuing with two of the bidders.

Once the subcontractor is selected and the subcontractor's installation plan is approved, field mobilization will be scheduled to occur in late October or early November 2000.

Barrier Wall Extraction System Upgrades - Off-Site Area (3.b.)

The work for the Barrier Wall Extraction System Upgrades has been divided into two sections: the construction of extraction trenches and wells, and the installation of underground piping and conveyance. The first RFB, the Extraction Trenches and Wells RFB, was submitted to potential bidders on September 18, 2000, and a pre-bid site walk

was conducted September 25, 2000. Bids are due in early October 2000. Once a subcontractor is selected and their installation plan is approved, field mobilization is scheduled to begin in November 2000.

The second RFB, the Underground Piping and Conveyance RFB, will be completed and submitted to potential bidders in early October 2000. Once a subcontractor is selected and their installation plan is approved, field mobilization will be scheduled to begin in late November 2000.

Project Management (6)

No unresolved delays were encountered during September that would impact the draft schedule. The final schedule will be completed and submitted to the Agencies soon after the Consent Decree is entered by the court. When the schedule is finalized, a copy of the schedule and the percent complete for each task will be included in the monthly status reports.

An on-site office trailer will be brought to the Site and in operation shortly before the first construction begins in late October or November 2000. Regular weekly construction meetings will begin during mobilization of the first subcontractor.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Groundwater Treatment System Quarterly Monitoring Report, Second Quarter 2000, has been completed and will be submitted to the Agencies in early October 2000.

The groundwater treatment plant (GWTP) continued to treat water collected from the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES). An effluent compliance sample was collected on September 14, 2000. The preliminary analytical data received to date indicated that no exceedances were observed in the compliance sample.

The effluent of the GWTP has been temporarily rerouted to discharge in the wetlands south of the railroad tracks. The discharge was rerouted to assist in temporarily dewatering the wetland for the PCB sediment removal scheduled to begin October or November 2000.

Groundwater, Air Quality, Wetland, and Residential Well Monitoring (B.7.)

The Third Quarter 2000 sampling event occurred during the week of September 18, 2000. Samples were collected from all the monitoring wells in the groundwater monitoring network and analyzed for indicator parameters. Groundwater levels and groundwater samples from site piezometers and monitoring wells were collected in accordance with the U.S. EPA-approved Long Term Groundwater Monitoring Program.

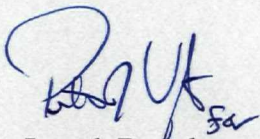
Residential Well Water Quality Monitoring (B.8.)

The residential wells adjacent to the ACS Site were sampled during the Third Quarter 2000 groundwater sampling event scheduled during the weeks of September 18 and 25, 2000. Samples were collected from five residential wells and analyzed for full scan. Results will be included in the first monthly status report after we receive the validated results.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about November 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
M. Travers
R. Adams

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MONTGOMERY WATSON

November 9, 2000

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, Mail Code SR-6J
77 West Jackson Boulevard
Chicago, IL 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – October 2000 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree lodged July 14, 2000, and covers the activities undertaken at the Site during October 2000.

The following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next several months. The activities are grouped in accordance with Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

As approved by U.S. EPA, Montgomery Watson continued developing the Request for Bid (RFB) for submittal to potential subcontractors for the spoils pile consolidation. The RFB is scheduled to be submitted in Winter 2000/Spring 2001.

The fieldwork for the Spoils Pile Consolidation is tentatively scheduled to begin in Spring 2001.

Drum Removal in On-Site Containment Area (1.c.)

Montgomery Watson continued developing the RFB for submittal to potential subcontractors for the drum removal. Preliminary delineation of the drum removal area outlined in the Agency-approved Buried Drum Removal Plan has been made using a Global Positioning System (GPS) unit. The RFB is scheduled to be distributed to potential subcontractors in November 2000.

The fieldwork for the Drum Removal is tentatively scheduled to begin in Winter 2000/2001.

PCB Sediment Excavation from Wetland (1.d.)

Montgomery Watson received three responses to the RFB for the PCB Sediment Excavation. One of the bids was non-responsive and the other two came in at costs significantly higher than the estimated cost for the activity. We worked with both contractors in an attempt to reduce the cost but were unsuccessful. We believe that the timing played a role. It is nearing the end of the construction season, and the bidding subcontractors seemed to be including too large a safety factor in their cost estimate. We will continue to try to find ways to achieve a reasonable cost subcontractor, perhaps by combining the work with the drum removal. If we are not successful, we will schedule the work for the next construction season. We have discussed those alternatives with you and will keep the Agencies informed if the schedule changes.

The fieldwork for the PCB Sediment Excavation is still scheduled to begin in Winter 2000/2001, after we work out a more cost effective approach.

ORC® Treatment in the North Area (1.e.)

Montgomery Watson continued developing the summary report for the pilot study. This report will include a summary of ORC® pilot study in the North Area and proposes continued quarterly monitoring of monitoring wells MW-48 and MW-49 for biological activity. It will also include a proposal for a pilot study to be conducted in the South Area.

The pilot study summary report and proposed plan will be submitted to U.S. EPA and IDEM in November 2000.

Groundwater Treatment Plant Upgrade (3.a.)

The mechanical and electrical/instrumentation subcontractors continued to install piping, conduit, and instrumentation, and develop the program for the programmable logic center (PLC). We will continue to phase in the startup and optimization, bringing on new equipment as the piping and controls for the various components are completed. The Gravity Phase Separator (T-101), Mixing Tank (T-103); CPI Oil Water Separator (ME-1), and Aerated Equalization Tank (T-102) were hydrostatically tested. Major construction is expected to be completed in mid-November 2000. Startup/optimization are ongoing and expected to be completed in December 2000.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

Contract Dewatering Services, Inc. has been recommended to the ACS PRP Group as the subcontractor to install the separation barrier wall between the On-Site and Off-Site areas. Once the work order is approved and the subcontractor's installation plans are approved, field mobilization will be scheduled to occur in mid to late November 2000.

Barrier Wall Extraction System Upgrades - Off-Site Area (3.b.)

The work for the Barrier Wall Extraction System Upgrades has been divided into three sections: the construction of extraction trenches and wells; the installation of underground piping and conveyance; and electrical, control and instrumentation. Contract Dewatering Services, Inc. has been recommended to the ACS PRP Group as the subcontractor to perform the construction of extraction trenches and wells. Once the work order is approved and their installation plan is approved, field mobilization will be scheduled to begin in mid to late November 2000. Proposed trench locations have been marked in the field.

The second RFB, the Underground Piping and Conveyance RFB, was completed and submitted to potential bidders on October 10, 2000. Bids have been received and are being reviewed. Once a subcontractor is selected and their installation plan is approved, field mobilization will be scheduled to begin in late November 2000.

An electrical, control and instrument subcontractor has been recommended for the third portion of the Barrier Wall Extraction System Upgrades.

PROJECT MANAGEMENT (6)

The final schedule will be completed and submitted to the Agencies soon after the Consent Decree is entered by the court. When the schedule is finalized, a copy of the schedule and the percent complete for each task will be included in the monthly status reports.

An on-site office trailer will be brought to the Site and in operation shortly before the first construction begins in mid to late November 2000. Regular weekly construction meetings will begin during mobilization of the first subcontractor.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Groundwater Treatment System Quarterly Monitoring Report, Second Quarter 2000, was submitted to the Agencies in early October 2000.

The groundwater treatment plant (GWTP) continued to treat water collected from the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES). The effluent compliance sample was collected on October 11, 2000. The sample contained zinc at a concentration higher than our discharge limit. The result was

589 µg/L; the effluent limit is 411 µg/L. The most likely cause of this is that the sample was collected from a different sample tap than previous samples. The effluent of the GWTP is temporarily being rerouted to limit the influent to the wetlands to assist in the PCB-impacted sediment removal. Therefore, the normal sample tap was not inline with the temporary reroute and could not have been used for this sampling event. The sample tap used for the October 2000 sampling event is located on the metal header system for the final GAC units. Zinc could have leached from the metal in the header system or sample tap and resulted in a higher concentration in the sample. The effluent will be rerouted for the November 2000 sampling event so that the effluent can be re-sampled at the normal sample tap. The effluent was resampled for metals on November 6, 2000 and rapid-turnaround results were received on November 9, 2000. No zinc was detected in the sample.

The effluent of the GWTP has been temporarily rerouted to discharge in the wetlands south of the railroad tracks. The discharge was rerouted to assist in temporarily dewatering the wetland for the PCB sediment removal.

Groundwater, Air Quality, Wetland, and Residential Well Monitoring (B.7.)

Forty-two monitoring wells and five private wells were sampled during the September 2000 groundwater monitoring event. Water level readings were also recorded from site piezometers and monitoring wells. The 42 monitoring wells were sampled for indicator VOCs and metals, and the five private wells were sampled for full scan analysis. Preliminary review of VOC analyses results from the 42 monitoring wells indicate that samples from 27 wells were non-detect, samples from 11 wells were below maximum baseline values, and samples from four wells exceeded maximum baseline values. The wells that exceeded baseline values for VOCs were MW10C, MW19, MW45, and ATMW4D. Preliminary review of metals analyses results from the samples from 42 monitoring wells indicate that 29 samples were non-detect, eight samples were below maximum baseline values, and five samples exceeded maximum baseline values. The five wells that exceeded baseline values for metals were MW19, MW15, MW50, MW43, and MW45. The results are being tabulated and will be provided with the next monthly status report in accordance with section 40 (b) of the Consent Decree.

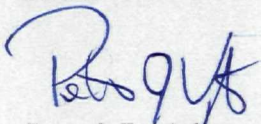
Residential Well Water Quality Monitoring (B.8.)

The residential wells adjacent to the ACS Site were also sampled during the Third Quarter 2000 groundwater sampling event during September 2000. Samples were collected from five residential wells and analyzed for full scan. For each well, VOC, SVOC, PCB and Pesticide results were non-detect, and inorganic results were in the expected range of values.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about December 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



Joseph D. Adams, Jr., P.E.
Project Coordinator

cc: B. Magel
M. Travers
R. Adams

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MONTGOMERY WATSON

December 8, 2000

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, Mail Code SR-6J
77 West Jackson Boulevard
Chicago, IL 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – November 2000 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree lodged July 14, 2000, and covers the activities undertaken at the Site during November 2000.

The following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next several months. The activities are grouped in accordance with Appendix G of the Consent Decree. The number and letter in parenthesis at the end of each reading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

The Request for Bid (RFB) for this work is scheduled to be made available to potential subcontractors during Winter 2000/Spring 2001. The fieldwork for the Spoils Pile Consolidation is tentatively scheduled to begin in Spring 2001.

Drum Removal in On-Site Containment Area (1.c.)

Montgomery Watson continued developing the RFB for submittal to potential subcontractors for the drum removal. The RFB is scheduled to be distributed to potential subcontractors in January 2000. The anticipated extent of the subsurface was demarked in the field based on existing figures and field measurements with a GPS system. We are also planning to excavate delineated trenches around each drum burial area in the next four to six weeks to provide physical demarcation of each of these areas. Initial bids have been requested for the construction of the required drum staging area(s) for drum sampling, short-term storage, and consolidation.

Construction of the drum staging pad is tentatively scheduled to begin in February 2001 and removal activities are tentatively scheduled to begin in late February or March 2001.

PCB Sediment Excavation from Wetland (1.d.)

As mentioned in last month's letter, we are still evaluating additional cost effective alternatives for excavation and disposal of the PCB-impacted soils. The fieldwork for the PCB Sediment Excavation is currently scheduled for summer 2001, when the water levels are expected to be at their lowest and the chance of inundation by surface water is lowest.

ORC[®] Treatment in the North Area (1.e.)

The pilot study summary report was submitted to U.S. EPA and IDEM in November 2000. The report summarized the ORC[®] pilot study in the north area, and proposed continued quarterly monitoring in the north area and a new pilot study in the south area. When we receive comments regarding the report from the Agencies, we will respond accordingly and proceed with planning the additional work.

Groundwater Treatment Plant Upgrade (3.a.)

The work of the mechanical and electrical/instrumentation subcontractors is substantially complete. The upgraded computer terminal and programmable logic center (PLC) have been installed, and all input and output signals have been tested. Montgomery Watson personnel have begun documenting construction completion and startup inspections/tests on a quality control checklist, and plan to have the checklist completed by mid-December.

Communication via the PLC between various interlocked components of the Groundwater Treatment Plant (GWTP) will be checked for completeness and correctness. The upgraded system is scheduled to be up and running by the end of December; system optimization will extend through January 2001.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

Contract Dewatering Services, Inc. has been selected as the subcontractor to install the separation barrier wall between the On-Site and Off-Site areas. On November 21, Contract Dewatering Services, Inc. collected soil and groundwater samples to aid in their selection of a final mix design of bentonite slurry. On November 28, an internal kick-off meeting was held between Montgomery Watson and Contract Dewatering to discuss the status of the work plan and quality construction plan to be submitted by Contract Dewatering.

Mobilization is tentatively scheduled to begin the week of December 11, 2000, contingent upon approval of the work plan and quality construction plan to be submitted by Contract Dewatering Services, Inc.

Barrier Wall Extraction System Upgrades - Off-Site Area (3.b.)

Contract Dewatering Services, Inc. has also been selected as the subcontractor to construct the extraction trenches and wells. This task is scheduled to be performed simultaneously with the installation of the Separation Barrier Wall. As mentioned in the above section, an internal kick-off meeting was held on November 28; and field mobilization is scheduled to begin December 11, 2000, pending approval of Contract Dewatering Services Inc.'s installation plan.

Bids have been received for the installation of underground piping and conveyance for the Barrier Wall Extraction System Upgrades. Final selection is pending.

An electrical, control and instrument subcontractor has been recommended to the ACS PRP Group for tasks associated with the Barrier Wall Extraction System Upgrades. Final selection is pending.

PROJECT MANAGEMENT (6)

The final schedule will be completed and submitted to the Agencies soon after the Consent Decree is entered by the court. When the schedule is finalized, a copy of the schedule and the percent complete for each task will be included in the monthly status reports.

Regular weekly construction meetings will begin in December. The first meeting is scheduled for Thursday, December 14, 2000 at 10 a.m., the meeting date and time for each subsequent meeting will be confirmed on a meeting-to-meeting basis.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Groundwater Treatment System Quarterly Monitoring Report, Third Quarter 2000, is being prepared, and is scheduled to be submitted to the Agencies before January 2001.

The groundwater treatment plant (GWTP) continued to treat water collected from the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES). The effluent compliance sample was collected on November 6, 2000. No exceedences of performance standards were observed. Table 2.3 is attached, summarizing the November compliance sampling results.

The effluent of the GWTP is once again being discharged in the wetlands south of the railroad tracks, as of the middle of November. The discharge was temporarily rerouted to be released south of the railroad tracks to assist in dewatering the wetland when we had the expectation of conducting the PCB sediment removal during the Fall 2000 time frame.

Groundwater, Air Quality, Wetland, and Residential Well Monitoring (B.7.)

Forty-two monitoring wells and five private wells were sampled during the September 2000 groundwater monitoring event. The draft tables summarizing the VOC and metal results are attached in Tables 8, 9, and 10. The full report is being prepared for future submittal.

The groundwater sampling event for the fourth quarter of 2000 was conducted on November 17 and 20, 2000. Water level readings were recorded for all monitoring wells and piezometers in the monitoring network, and five monitoring wells were sampled: MW48, MW49, MW10C, MW9R, and ATMW4D. Complete analysis reports have not yet been finished by the laboratory.

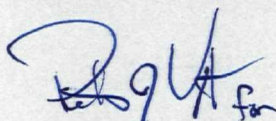
Residential Well Water Quality Monitoring (B.8.)

No residential wells were sampled during the fourth quarter 2000 sampling event.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about January 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures: Data Table 2.3 – Summarizing the November 2000 GWTP Compliance Results
Data Tables 8, 9, and 10 – Summarizing the September 2000 GW Monitoring Results

cc: B. Magel
M. Travers
R. Adams

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Table 2.3
Summary of Effluent Analytical Results - Fourth Quarter 2000
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

DRAFT

Event	Month 42	
Date	11/6/00	Effluent Limits
pH	7.39	6-9
TSS	ND	30
BOD	ND	30
Arsenic	ND	50
Beryllium	ND	NE
Cadmium	ND	4.1
Manganese	13.8	NE
Mercury	ND	0.02 (w/DL = 0.64)
Selenium	ND	8.2
Thallium	ND	NE
Zinc	ND	411
Benzene	ND	5
Acetone	3	6,800
2-Butanone	3	210
Chloromethane	ND	NE
1,4-Dichlorobenzene	ND	NE
1,1-Dichloroethane	ND	NE
cis-1,2-Dichloroethene	ND	70
Ethylbenzene	ND	34
Methylene chloride	ND	5
Tetrachloroethene	ND	5
Trichloroethene	ND	5
Vinyl chloride	ND	2
4-Methyl-2-pentanone	3	15
bis (2-Chloroethyl) ether	ND	9.6
bis(2-Ethylhexyl) - phthalate	ND	6
4 - Methylphenol	ND	34
Isophorone	ND	50
Pentachlorophenol	0.11	1
PCB/Aroclor-1016	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1221	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1232	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1242	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1248	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1254	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1260	ND	0.00056 (w/DL = 0.1 to 0.9)

Notes:

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD₅ data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Lab detection limit was above effluent reporting limits. An explanation can be found in text.

Suffix Definitions:

_J = Data qualifier added by laboratory

_V = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an compound is also detected in the method blank resulting in a potential high bias

UB = Analyte is not detected at or above the indicated concentration due to blank

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

Table 8
Summary of Organic Compound Detections in the Upper Aquifer
Validated Results
September 2000
American Chemical Service Superfund Site
Griffith, Indiana

Parameter	M-1S		M-4S		MW-06		MW-11		MW-12		MW-13		MW-14		MW-15	
	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV
VOCs (ug/L)																
Benzene			130	190	130	320									2	J/ 10
Chloroethane			37	1,300	22	720										
trans-1,2-Dichloroethene			4	J/ NA												

Notes:

BV = Baseline Value

NA = Not analyzed for this parameter

NS = Not sampled.

/ = No data qualifier required

J/_ = Data qualifier added by laboratory

_/_J = Data qualifier added by data validator

Data qualifiers are defined in Appendix C.

D = Results based on diluted sample

J = Estimated value

A blank cell indicates the parameter was not detected.

Bold result indicates an exceedance of BV

Table 8
 Summary of Organic Compound Detections in the Upper Aquifer
 Validated Results
 September 2000
 American Chemical Service Superfund Site
 Griffith, Indiana

Parameter	MW-18		MW-19		MW-37		MW-38		MW-39		MW-40		MW-41	
	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV
VOCs (ug/L)														
Benzene	NS		7 J/	10					1 J/	12				
Chloroethane	NS		35	20										
trans-1,2-Dichloroethene	NS								2 J/	NA				

Notes:

BV = Baseline Value

NA = Not analyzed for this parameter

NS = Not sampled.

/ = No data qualifier required

J/_ = Data qualifier added by laboratory

_/_J = Data qualifier added by data validator

Data qualifiers are defined in Appendix C.

D = Results based on diluted sample

J = Estimated value

A blank cell indicates the parameter was not detected.

Bold result indicates an exceedance of BV

Table 8
Summary of Organic Compound Detections in the Upper Aquifer
Validated Results
September 2000
American Chemical Service Superfund Site
Griffith, Indiana

Parameter	MW-42		MW-43		MW-44		MW-45		MW-46		MW-47		MW-48		MW-49	
	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV
VOCs (ug/L)																
Benzene							43	1,045	NS				4,100 D/	9,500	630 D/	6,750
Chloroethane							820 D/	215	NS				100 D/J/	1,000	220 D/	715
trans-1,2-Dichloroethene									NS						1 J/	NA

Notes:

BV = Baseline Value

NA = Not analyzed for this parameter

NS = Not sampled.

/_ = No data qualifier required

J/_ = Data qualifier added by laboratory

/_J = Data qualifier added by data validator

Data qualifiers are defined in Appendix C.

D = Results based on diluted sample

J = Estimated value

A blank cell indicates the parameter was not detected.

Bold result indicates an exceedance of BV

DRAFT

Table 9
Summary of Organic Compound Detections in the Lower Aquifer
Validated Results
September 2000
American Chemical Service Superfund Site
Griffith, Indiana

Parameter	M-4D		ATMW-4D		MW-07		MW-08		MW-09R		MW-10C		MW-23	
	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV
VOCs (ug/L)														
Benzene			1,200	D/ NS					65	310	520	D/	150	
Chloroethane			88	NS					970	D/	2,900	630	D/	420

Notes:

BV = Baseline Value

NA = Not analyzed for this parameter

NS = Not sampled

/_/ = No data qualifier required

J/_ = Data qualifier added by laboratory

/ = Data qualifier added by data validator

D = Results based on diluted sample

J = Estimated value

Data qualifiers are defined in Appendix C

A blank cell indicates parameter not detected.

Bold result indicates an exceedance of BV

DRAFT

Table 9
Summary of Organic Compound Detections in the Lower Aquifer
Validated Results
September 2000
American Chemical Service Superfund Site
Griffith, Indiana

Parameter	MW-24		MW-28		MW-29		MW-30		MW-31		MW-32	
	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV
VOCs (ug/L)												
Benzene							3	J/	10			
Chloroethane					2	J/	10					

Notes:

BV = Baseline Value

NA = Not analyzed for this parameter

NS = Not sampled

/_ = No data qualifier required

J/_ = Data qualifier added by laboratory

/ = Data qualifier added by data validator

D = Results based on diluted sample

J = Estimated value

Data qualifiers are defined in Appendix C

A blank cell indicates parameter not detected.

Bold result indicates an exceedance of BV

DRAFT

Table 9
Summary of Organic Compound Detections in the Lower Aquifer
Validated Results
September 2000
American Chemical Service Superfund Site
Griffith, Indiana

Parameter	MW-33		MW-34		MW-50		MW-51		MW-52		MW-53		MW-54R		MW-55	
	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV	Sep-00	BV
VOCs (ug/L)																
Benzene											3	J/	10	1	J/	10
Chloroethane																

Notes:

BV = Baseline Value

NA = Not analyzed for this parameter

NS = Not sampled

/_ = No data qualifier required

J/_ = Data qualifier added by laboratory

/_J = Data qualifier added by data validator

D = Results based on diluted sample

J = Estimated value

Data qualifiers are defined in Appendix C

A blank cell indicates parameter not detected.

Bold result indicates an exceedance of BV

Table 10
Summary of Inorganic Baseline Exceedances
September 2000
Groundwater Monitoring
American Chemical Service Superfund Site
Griffith, Indiana

DRAFT

Well	Potentially Significant Jun-99	Potentially Significant Mar-00	Arsenic		Lead		Total Number of
			Sep-00	Baseline	Sep-00	Baseline	EXCEEDANCES
UPPER AQUIFER WELLS							
M-1S			3.9	3			1
M-4S							0
MW-06	R, M	R					0
MW-11	M	R					0
MW-12							0
MW-13	R	R					0
MW-14	F, M, R						0
MW-15	R	R	68	59			1
MW-18		NS					0
MW-19		R	29.9	27			1
MW-37							0
MW-38							0
MW-39	R	R					0
MW-40							0
MW-41							0
MW-42	M						0
MW-43	M	M, R	101	81			1
MW-44		M, R					0
MW-45	M, R		47.6	44			1
MW-46	R	M, R					0
MW-47							0
MW-48							0
MW-49		R					0
LOWER AQUIFER WELLS							
M-4D							0
MW-07							0
MW-08		R					1
MW-09R							1
MW-10C							0
MW-23							3
MW-24		R					1
MW-28		R					1
MW-29	M						2
MW-30	R	R					3
MW-31		R					3
MW-32		R					3
MW-33							1
MW-34							0
MW-36							0
MW-50	M		8.2	7.7	16.1	14	2
MW-51							1
MW-52							0
MW-53							1
MW-54R	R	R					2
MW-55		R					1
Number of Exceedances			6		1		31

Notes:

- Complete report will be submitted next month
- Boxed numbers indicate that the inorganic species in the September 2000 results exceeded the maximum baseline concentration
- Blank cells indicate that for the September 2000 sampling round, the inorganic species did not exceed the baseline maximum
- All monitoring wells were analyzed for indicator parameters, Arsenic and Lead, during September 2000.
- R = Recurrence: Sample results are potentially significant due to recurrence of exceedance.
- F = Frequency: Sample results are potentially significant due to the frequency of exceedance (>25% or 7 individual samples)
- M = Magnitude: Sample results are potentially significant due to magnitude of exceedance (>2x maximum baseline)

NS = Not sampled.

 - Boxed numbers indicate potentially significant results



MONTGOMERY WATSON

January 8, 2001

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, Mail Code SR-6J
77 West Jackson Boulevard
Chicago, IL 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – December 2000 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree lodged July 14, 2000, and covers the activities undertaken at the Site during December 2000.

The following is a summary of activities conducted during last month, as well as a list of anticipated activities to be conducted during the next several months. The activities are grouped in accordance with Appendix G of the Consent Decree. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

The Request for Bid (RFB) for this work is scheduled to be made available to potential subcontractors during Winter/Spring 2001. The fieldwork for the Spoils Pile Consolidation is tentatively scheduled to begin in Spring 2001.

1. state ORC comments
to MW.

2. need blank values
for Res. wells.

Drum Removal in On-Site Containment Area (1.c.)

A draft RFB will be sent to the Agencies for review in mid January 2001. Following U.S. EPA approval, the final RFB will be distributed to potential subcontractors. Drum extent demarcation is proposed for performance at the end of January, weather permitting.

Construction of the drum staging pad is tentatively scheduled to begin in February 2001 and removal activities are tentatively scheduled to begin in March 2001.

PCB Sediment Excavation from Wetland (1.d.)

The fieldwork for the PCB Sediment Excavation program approved by the U.S. EPA is currently scheduled for summer 2001, when the water levels are expected to be at their lowest and the chance of inundation by surface water is lowest.

ORC[®] Treatment in the North Area (1.e.)

The pilot study summary report was submitted to U.S. EPA and IDEM in November 2000, summarizing the ORC[®] pilot study in the north area, and proposing continued quarterly monitoring in the north area and a new pilot study in the south area. After receiving U.S. EPA approval, we will proceed with planning the proposed additional work.

*send
State
Comments
on
ORC*

Groundwater Treatment Plant Upgrade (3.a.)

The mechanical work (including piping, pump installation, etc.) is complete. The electrical wiring is also complete. The control systems are currently being debugged. Montgomery Watson personnel continue to document construction completion and startup inspections/tests on a quality control checklist. This checklist will be finalized when the debugging process is finished.

The startup of the catalytic oxidizer/scrubber air treatment unit is scheduled for mid January 2001. Montgomery Watson is currently working with the local natural gas company, NIPSCO, to get a second natural gas line to the treatment building for the unit. The upgraded system is scheduled to be up and running by mid January; system optimization will extend through the end of January 2001.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

Contract Dewatering Services, Inc (CDS), the subcontractor selected to install the separation barrier wall between the On-Site and Off-Site areas, will be submitting a final design to Montgomery Watson in mid January 2001. After Montgomery Watson reviews and approves the design as being consistent with the U.S. EPA approved design, fieldwork will begin. The fieldwork is scheduled to be completed in mid February.

Barrier Wall Extraction System Upgrades - Off-Site Area (3.b.)

Montgomery Watson has reviewed and approved the design and work plan submitted by CDS, the subcontractor selected for the Barrier Wall Extraction System Upgrades. CDS has completed mobilization and Site preparation. Materials for the extraction trenches (collection pipe and well riser pipes) have been delivered to the Site and the installation of extraction well EW-20 has been begun. However, due to mechanical problems with the

trencher brought on by cold weather, continued work on the extraction trenches has been temporarily postponed while the trencher is returned to the shop for repair. In the interim, CDS will begin mobilizing for the installation of the Separation Barrier Wall (4.a.) described above.

Bids have been received for the installation of underground piping and conveyance for the Barrier Wall Extraction System Upgrades. Koester Environmental Services, Inc. has been selected as the subcontractor to perform this work. Mobilization is scheduled to begin in late January 2001.

Montgomery Watson has solicited the services of Austgen Electric to install underground power and communication cables for the Barrier Wall Extraction System Upgrades. Austgen is the contractor currently completing the electrical and instrumentation work for the Groundwater Treatment Plant Upgrades.

PROJECT MANAGEMENT (6)

The final schedule will be completed and submitted to the Agencies soon after the Consent Decree is entered by the court. When the schedule is finalized, a copy of the schedule and the percent complete for each task will be included in the monthly status reports.

Regular on-site construction meetings began in December. The first meeting was held Thursday, December 14, 2000 at 10 a.m. An additional meeting was held on December 28. Future meetings will be tentatively scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting will be faxed to all participants by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Groundwater Treatment System Quarterly Monitoring Report, Third Quarter 2000, has been prepared and submitted to the ACS PRP Group for review. It is scheduled to be submitted to the Agencies during January 2001.

The groundwater treatment plant (GWTP) continued to treat water collected from the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES). The effluent compliance sample was collected on December 4, 2000. A small exceedence of pentachlorophenol was observed (the value reported by the lab was 1.1 ug/L, exceeding the effluent limit of 1.0 ug/L). There are no known causes of this exceedence, and pentachlorophenol has not been a problem in the past. We will continue to monitor for pentachlorophenol in coming months. No other exceedences were observed. Table 2.3 is attached, summarizing the December compliance sampling results.

Please note that the data contained in Table 2.3 has not yet been validated by an independent validator.

Groundwater, Air Quality, Wetland, and Residential Well Monitoring (B.7.)

The June 2000 Groundwater Monitoring Report was submitted to the Agencies during December 2000. The September 2000 Groundwater Monitoring Report is scheduled to be submitted to the Agencies in early February 2001. Data from the November 2000 sampling event has been received from the laboratory. It will be processed and compiled into a summary table for the next monthly status report.

The next round of groundwater monitoring is scheduled for March 2001.

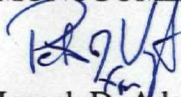
Residential Well Water Quality Monitoring (B.8.)

Five residential wells were sampled in September 2000 in accordance with the groundwater monitoring plan. Two tables have been attached to this letter summarizing the residential wells sample results. Results will also be included as part of the September 2000 Groundwater Monitoring Report.

The next monthly report will be forwarded to U.S. EPA and IDEM on or about February 10, 2000. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures: Data Table 2.3 – Summarizing the December 2000 GWTP Compliance Results
Data Tables A and 11 – Summarizing the September 2000 GW Monitoring Results from Residential Wells

cc: B. Magel
M. Travers
R. Adams

TMK/RAA/PJV
J:\209\0601 ACS\0202 MWA PM\msr\Jan01.doc
2090601.0202

Table 2.3
Summary of Effluent Analytical Results - Fourth Quarter 2000
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event	Month 43	
Date	12/4/00	Effluent Limits
pH	7.57	6-9
TSS	ND	30
BOD	ND	30
Arsenic	ND	50
Beryllium	0.26 B/	NE
Cadmium	ND	4.1
Manganese	41.3	NE
Mercury	ND	0.02 (w/DL = 0.64)
Selenium	ND	8.2
Thallium	ND	NE
Zinc	3.7 B/	411
Benzene	ND	5
Acetone	1 JB/	6,800
2-Butanone	ND	210
Chloromethane	ND	NE
1,4-Dichlorobenzene	ND	NE
1,1-Dichloroethane	ND	NE
cis-1,2-Dichloroethene	ND	70
Ethylbenzene	ND	34
Methylene chloride	0.7	5
Tetrachloroethene	ND	5
Trichloroethene	ND	5
Vinyl chloride	ND	2
4-Methyl-2-pentanone	ND	15
bis (2-Chloroethyl) ether	ND	9.6
bis(2-Ethylhexyl) - phthalate	ND	6
4 - Methylphenol	ND	34
Isophorone	ND	50
Pentachlorophenol	ND	1
PCB/Aroclor-1016	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1221	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1232	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1242	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1248	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1254	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1260	ND	0.00056 (w/DL = 0.1 to 0.9)

Notes:

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD₅ data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Lab detection limit was above effluent reporting limits. An explanation can be found in text.

Suffix Definitions:

/_ = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias

UB = Analyte is not detected at or above the indicated concentration due to blank contamination

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

Table A
Summary of Organic Compound Detections in the Residential Wells
September 2000
American Chemical Service NPL Site
Griffith, Indiana

DRAFT

Parameter	PW-A			PW-B			PW-C			PW-D			PW-Y		
	Sep-00	DL		Sep-00	DL		Sep-00	DL		Sep-00	DL		Sep-00	DL	
VOCs															
2-Butanone	4	J/	5												
Bromochloromethane							0.2	J/	1						
Methylene Chloride										0.5	J/	1	0.5	J/	1
Carbon Disulfide										0.08	J/	1			
Acetone													8		5
SVOCs															
PCBs/Pesticides															

Notes:

All results in micrograms per liter (ug/L).

DL = Detection Limit

ND = Not detected

J/_ = Data qualifier added by laboratory

D = Results based on diluted sample

J = Estimated value

Data qualifiers are defined in Appendix C

A blank cell indicates parameter not detected.

Data is draft data, pending completion of independent validation.

*Need trip
blank
values*

Table 11
Comparison of Private Well Detections to
Maximum Contaminant Levels (MCLs) - September 2000
American Chemical Services NPL Site
Griffith, Indiana

Analyte	Sample Location and Concentration (ug/L)					MCL (ug/L)
	PW-A	PW-B	PW-C	PW-D	PW-Y	
Aluminum	--	--	--	--	--	NA
Antimony	--	2.6 B/	--	--	--	6
Arsenic	--	--	--	--	--	50
Barium	130 B/	123 B/	167 B/	150 B/	144 B/	2,000
Beryllium	--	--	--	--	--	4
Cadmium	--	--	--	--	--	5
Calcium	87,300	88,700	92,900	95,000	86,100	NA
Chromium	0.78 B/	0.51 B/	0.71 B/	1.5 B/	--	100
Cobalt	--	--	--	--	--	NA
Copper	2.3 B/	2.1 B/	1.8 B/	4 B/	1.8 B/	1,300
Cyanide	--	--	--	--	--	200
Iron	2,060	3,290	2,830	2,400	4,710	NA
Lead	--	--	--	--	--	15
Magnesium	44,400	40,800	52,200	47,600	45,100	NA
Manganese	35.4	60.3	35.2	36.3	42.9	NA
Mercury	--	--	--	--	--	2
Nickel	--	--	--	--	--	NA
Potassium	2340 BE/	1,660 BE/	2620 BE/	2,400 BE/	2,520 BE/	NA
Selenium	--	--	--	--	--	50
Silver	--	--	--	--	--	NA
Sodium	18,200	16,500	32,200	20,900	23,200	NA
Thallium	--	52 B/	--	--	54 B/	2
Vanadium	--	--	--	--	--	NA
Zinc	11.1 B/	18 B/	16.7 B/	1.4 B/	25.8	NA

Notes:

ug/L = micrograms per liter

-- = Analyte not detected

NA = MCL does not exist for this analyte

B = Analyte in blank

E = Estimated concentration for inorganics

Shaded cells indicate exceedance of MCL

*Need trip
blank
values
& det. limits.*



MONTGOMERY WATSON

February 9, 2001

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, Mail Code SR-6J
77 West Jackson Boulevard
Chicago, IL 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – January 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). This document has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001, and covers the activities undertaken at the Site during the month of January 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

The Request for Bid (RFB) for this work is scheduled to be made available to potential subcontractors in mid-February 2001. The spoil pile consolidation will include the interim cover, which will need to precede the ISVE system. The fieldwork for the Spoils Pile Consolidation is tentatively scheduled to begin in the second quarter of 2001.

Drum Removal in On-Site Containment Area (1.c.)

The draft Request for Bid (RFB) has been sent to the Agencies for review. Comments are expected to be in by February 8, 2001. Following U.S. EPA approval, the final RFB will be distributed to potential subcontractors.

Construction of the drum staging pad is tentatively scheduled to begin in February 2001, and removal activities are tentatively scheduled to begin in March 2001.

PCB Sediment Excavation from Wetland (1.d.)

The fieldwork for the PCB Sediment Excavation program approved by the U.S. EPA is currently scheduled for summer 2001, when the water levels are expected to be at their lowest and the chance of inundation by surface water is lowest.

ORC[®] Treatment in the North Area (1.e.)

The pilot study summary report was submitted to U.S. EPA and IDEM in November 2000, summarizing the ORC[®] pilot study in the north area. The conclusion and recommendation section proposed continued quarterly monitoring in the north area and a new pilot study in the south area. We have received comments from the U.S. EPA and are developing a response.

Groundwater Treatment Plant Upgrade (3.a.)

The mechanical work (including piping, pump installation, etc.) is complete. The electrical wiring is also complete. The control systems are approximately 90% debugged. Montgomery Watson personnel continue to document construction completion and startup inspections/tests on a quality control checklist. This checklist will be finalized when the debugging process is finished. An auto sand filter backwash system is being added to the system as one of the final substantial upgrades.

The catalytic oxidizer/scrubber air treatment unit was started up in January 2001. The local natural gas company, NIPSCO, provided a second natural gas line to the treatment building for the operation of the oxidizer.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

Contract Dewatering Services, Inc (CDS), the subcontractor selected to install the separation barrier wall between the On-Site and Off-Site areas, submitted the final design to Montgomery Watson and completed installing the wall February 1, 2001.

Barrier Wall Extraction System Upgrades - Off-Site Area (3.b.)

Montgomery Watson has reviewed and approved the design and work plan submitted by CDS for the installation of two additional extraction trenches in the Off-Site Area. CDS has completed mobilization and Site preparation. Materials for the extraction trenches (collection pipe and well riser pipes) have been delivered to the Site. Mobilization continued during the week of February 5, 2001.

Koester Environmental Services, Inc. (KES) has been selected as the subcontractor for the installation of the conveyance piping. A construction kickoff meeting occurred February 5, 2001. Mobilization followed the meeting.

Montgomery Watson has solicited the services of Austgen Electric to install underground power and communication cables for the Barrier Wall Extraction System Upgrades in the Off-Site area. Austgen is the contractor that installed the electrical and instrumentation components of the Groundwater Treatment Plant Upgrades.

PROJECT MANAGEMENT (6)

The final schedule will be completed and submitted to the Agency by February 9, 2001, the due date the U.S. EPA established after the Consent Decree was entered. A copy of this schedule is attached. A copy of the schedule and the percent complete for each task will be included in future monthly status reports.

Regular on-site construction meetings were held during January. Meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Groundwater Treatment System Quarterly Monitoring Report, Fourth Quarter 2000, will be prepared and submitted to the ACS PRP Group for review and then submitted to the Agencies.

The groundwater treatment plant (GWTP) continued to treat water collected from the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES). The effluent compliance sample was collected on January 8, 2001. No exceedences occurred. The attached Table 2.3 summarizes the January compliance sampling results. Please note that an independent validator has not yet validated the data contained in Table 2.3. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report – First Quarter 2001.

Groundwater, Air Quality, Wetland, and Monitoring (B.7.)

The September 2000 Groundwater Monitoring Report is scheduled to be submitted to the Agencies in February 2001. Data from the November 2000 sampling event has been received from the laboratory and is attached as Tables 8 and 9. Also, the five monitoring wells sampled in November 2000 are included on the Monitoring Well Location Map. The November 2000 Groundwater Monitoring Report will be submitted to the Agencies soon after the September 2000 Report is submitted.

The next round of groundwater monitoring is scheduled for March 2001.

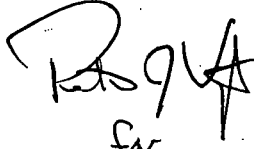
Residential Well Water Quality Monitoring (B.8.)

Preliminary results from the September 2000 residential well monitoring event were included in last month's progress report. A full listing of validated data will be included in the Groundwater Monitoring Report for September 2000. The next round of annual residential well monitoring is scheduled tentatively for September 2001.

The next monthly report will be forwarded to U.S. EPA and IDEM by March 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON

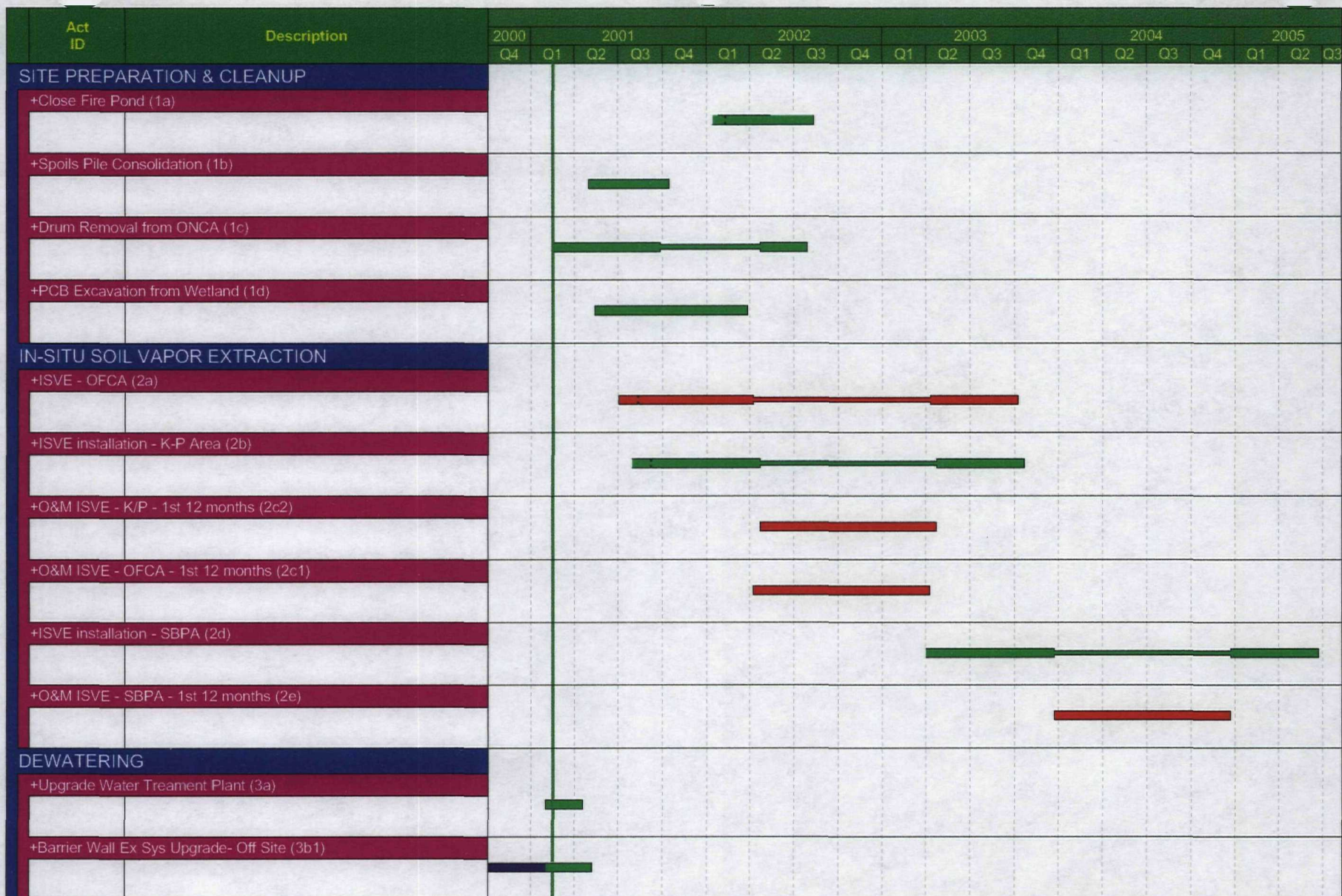


Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures: Schedule of Remedial Activities
Table 2.2 – Summary of Effluent Analytical Results - First Quarter 2001
Tables 8 and 9 – Summary of Organic Compound Detections – November 2000
Monitoring Well Location Map – Wells Monitored November 2000

cc: B. Magel
M. Travers
R. Adams

JRR\RAA\TMK\PJV
J:\209\0601 ACS\0202 MWA PM\msr\Feb01.doc
2090601.0202



Start date 07/31/00
 Data date 02/01/01
 Run date 02/08/01
 Page number 1A
 Page count 2A
 Project name ACS1
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ACS NPL SITE REMEDIAL ACTION SCHEDULE
 Sort by Phase and Task
 Preliminary Schedule

- Early bar
- Progress bar
- Critical bar
- Summary bar
- ▲ Progress point
- ▲ Critical point
- Summary point
- ◆ Start milestone point
- ◆ Finish milestone point

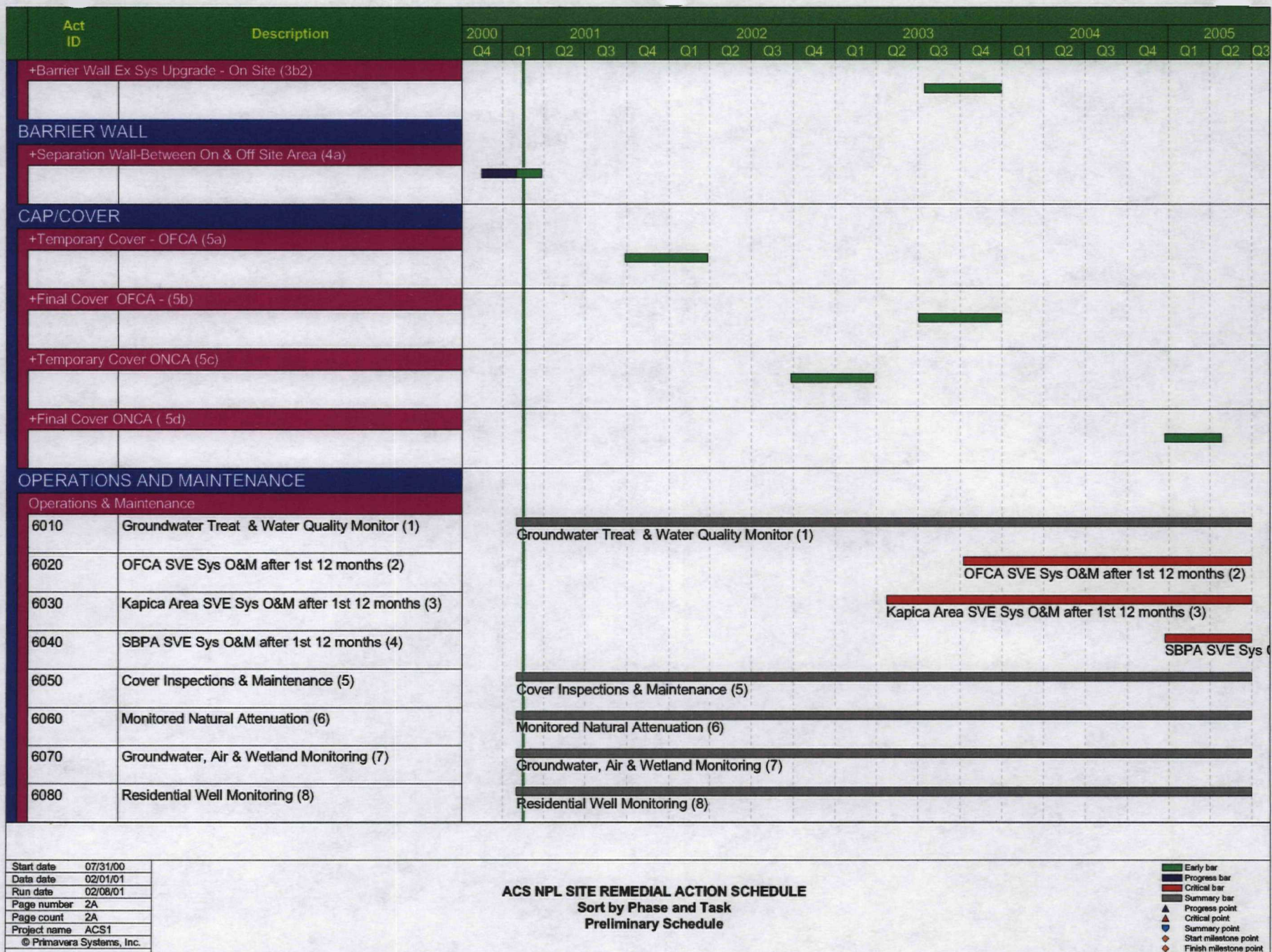


Table 2.2
Summary of Effluent Analytical Results - First Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event	Month 44	
Date	1/8/01	Effluent Limits
pH	7.52	6-9
TSS	ND	30
BOD	ND	30
Arsenic	ND	50
Beryllium	49.6	NE
Cadmium	ND	4.1
Manganese	184	NE
Mercury	ND	0.02 (w/DL = 0.64)
Selenium	ND	8.2
Thallium	ND	NE
Zinc	ND	411
Benzene	ND	5
Acetone	3	6,800
2-Butanone	2 J	210
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1,4-Dichlorobenzene	0.3 J	NE
1,1-Dichloroethane	ND	NE
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Methylene chloride	ND	5
Tetrachloroethene	ND	5
Trichloroethene	ND	5
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bis(2-Ethylhexyl) - phthalate	ND	6
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PCB/Aroclor-1232	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1242	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1248	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1254	ND	0.00056 (w/DL = 0.1 to 0.9)
PCB/Aroclor-1260	ND	0.00056 (w/DL = 0.1 to 0.9)

Notes:

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD₅ data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Lab detection limit was above effluent reporting limits. An explanation can be found in text.

Suffix Definitions:

/_ = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an compound is also detected in the method blank resulting in a potential high bias

UB = Analyte is not detected at or above the indicated concentration due to blank

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

Table 8
Summary of Organic Compound Detections in the Upper Aquifer
Validated Results - November 2000
American Chemical Service Superfund Site
Griffith, Indiana

Parameter	MW-48		MW-49	
	Nov-00	BV	Nov-00	BV
VOCs (ug/L)				
Benzene	1,100 D/	9,500	610 D/	6,750
Chloroethane	78	1,000	190 D/	715
trans-1,2-Dichloroethene			1 J/	NA

Notes:

ug/L = micrograms per liter

BV = Baseline Value

/_ = No data qualifier required

J/_ = Data qualifier added by laboratory

_J = Data qualifier added by data validator

Data qualifiers are defined in Appendix C.

D = Results based on diluted sample

J = Estimated value

A blank cell indicates the parameter was not detected.

Bold result indicates an exceedance of BV

Table 9
Summary of Organic Compound Detections in the Lower Aquifer
Validated Results - November 2000
American Chemical Service Superfund Site
Griffith, Indiana

DRAFT

Parameter	ATMW-4D		MW-09R		MW-10C	
	Nov-00	BV	Nov-00	BV	Nov-00	BV
VOCs (ug/L)						
Benzene	3,500	D/ NS	55	J/	310	1800 D/ 150
Chloroethane	120	NS	710		2,900	140 420

Notes:

ug/L = micrograms per liter.

BV = Baseline Value

/ = No data qualifier required

J/_ = Data qualifier added by laboratory

_/J = Data qualifier added by data validator

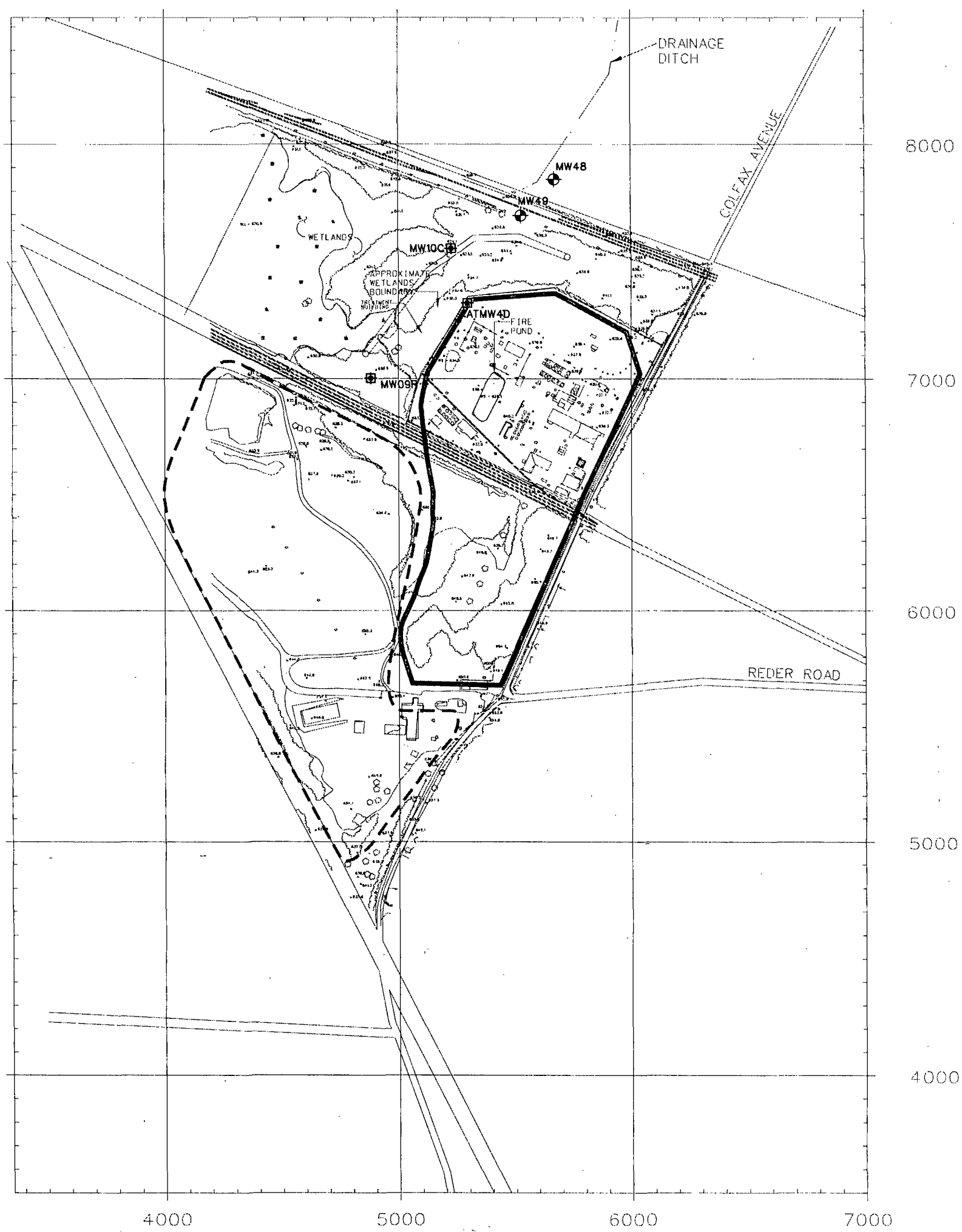
D = Results based on diluted sample



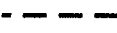


J = Estimated value

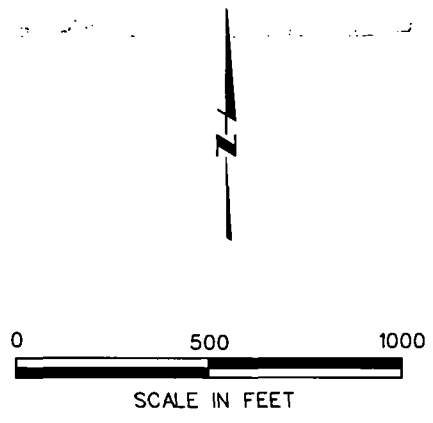
Data qualifiers are defined in Appendix C

A blank cell indicates parameter not detected.

Bold result indicates an exceedance of BV



- LEGEND**
-  BARRIER WALL
 -  PERIMETER GROUND WATER CONTAINMENT SYSTEM
 -  GRIFFITH LANDFILL BOUNDARY
 -  MW53 LOWER AQUIFER WELL LOCATION AND DESIGNATION
 -  MW48 UPPER AQUIFER WELL LOCATION AND DESIGNATION



SCALE
1"=500'


MONTGOMERY WATSON
Chicago, Illinois

AMERICAN CHEMICAL SERVICES, INC.
NPL SITE
GRIFFITH, INDIANA

**MONITORING WELL
LOCATION MAP**

FIGURE



MONTGOMERY WATSON

March 9, 2001

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, Mail Code SR-6J
77 West Jackson Boulevard
Chicago, IL 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Re: Progress Report – February 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). This document has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001, and covers the activities undertaken at the Site during the month of February 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

The Request for Bid (RFB) for this work was substantially completed and is scheduled to be distributed to potential subcontractors in mid-March 2001. Consolidation of the spoil piles will be conducted prior to installation of the interim engineered cover in the Off-Site Area, which will need to be placed before the installation of the ISVE system is started. The preliminary schedule is to begin fieldwork for the Spoils Pile Consolidation in the second quarter of 2001.

Drum Removal in On-Site Containment Area (1.c.)

The RFB for Drum Removal was distributed to potential subcontractors on February 9, 2001. A site walk was conducted on February 14 and bids were received from six contractors. The bids are currently being evaluated and during March a subcontractor will be selected to perform the work.

The buried drum areas were delineated by Midwest Materials February 20 through February 23. An excavator was used to confirm prior geophysical studies and outline the perimeter of the buried drum areas. The western-most area, Area C, was eliminated as a buried drum area after no buried drums were discovered in it. Work is progressing according to the Record of Decision.

Construction of the drum staging pad is scheduled to begin in March 2001, and drum removal activities are scheduled to begin in late March 2001.

PCB Sediment Excavation from Wetland (1.d.)

The fieldwork for the PCB Sediment Excavation program approved by the U.S. EPA is currently scheduled for summer 2001, when the water levels are expected to be at their lowest and the chance of inundation by surface water is lowest.

Groundwater Plume Treatment (1.e.)

Montgomery Watson will submit a revised work plan for the previously proposed ORC® pilot study in the south area to the Agencies during March. Work will begin upon approval.

Groundwater Treatment Plant Upgrade (3.a.)

The mechanical and electrical work on the GWTP Upgrade has been completed. Montgomery Watson personnel continue to document construction completion and startup inspections/tests on a quality control checklist. This checklist will be finalized when the debugging process is finished. An auto sand filter backwash system has been added to the system as one of the final substantial upgrades.

The upgraded system is currently operating to the capacity of the groundwater collection systems. Control debugging is expected to be completed in March 2001.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

Contract Dewatering Services, Inc (CDS), the subcontractor selected to install the separation barrier wall between the On-Site and Off-Site areas, completed installing the wall February 1, 2001. Montgomery Watson is currently compiling and evaluating completion documentation. This section will be removed from future status reports.

Barrier Wall Extraction System Upgrades - Off-Site Area (3.b.)

CDS has completed the installation of extraction wells EW-20, EW-20A, and EW-20B, in addition to EW-19 and EW-13A. Extraction wells EW-20C, EW-19A, and EW-19B are scheduled to be completed by mid-March. Final punchlists will be developed once construction is complete.

Koester Environmental Services, Inc. (KES) has installed and backfilled all required piping for the Off-Site BWES system upgrades north of the ACS railroad tracks. KES is expected to complete the piping by mid-March.

Montgomery Watson has solicited the services of Austgen Electric to install underground power and communication cables for the BWES Upgrades in the Off-Site area. Austgen is the contractor that installed the electrical and instrumentation components of the Groundwater Treatment Plant Upgrades.

Temporary Engineered Cover of Off-Site Area (5.a.)

The installation of a temporary engineered cover over the Off-Site Area will be conducted in conjunction with the consolidation of the spoil piles. The RFB will be distributed to potential subcontractors in mid-March 2001, and work is scheduled to begin in the second quarter of 2001.

PROJECT MANAGEMENT (6)

The final remedial action schedule was submitted to the Agencies on February 9, 2001, the due date that the U.S. EPA established after the Consent Decree was entered. As required by the Consent Decree, a copy of the schedule and the percent complete for each task (see Table 1) is included in this monthly status report. We are including a copy of the baseline schedule, with all progress reflected in Table 1 and in the text of this letter. By next month, progress should be incorporated directly into the schedule.

Regular on-site construction meetings were held during February. Meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Groundwater Treatment System Quarterly Monitoring Report, Fourth Quarter 2000, was submitted to the Agencies on March 2, 2001.

The groundwater treatment plant (GWTP) continued to treat water collected from the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES). The effluent compliance sample was collected on February 19, 2001. The attached Table 2.2 summarizes the February compliance sampling results. Please note that an independent validator has not yet validated the data contained in Table 2.2. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, First Quarter 2001.

An apparent discharge exceedence of total suspended solids (TSS) was observed in the February 2001 effluent compliance sample. The result was 400 mg/L, while the discharge limit is 30 mg/L. This is the first TSS exceedence since operation of the Groundwater

Treatment Plant began. Montgomery Watson is currently reviewing construction/operating logs for the GWTP to determine if any construction/upgrade activities could have resulted in a high concentration of TSS in the effluent. The effluent was resampled on March 5, 2001 and TSS was analyzed on a rush turn-around time. The result, received March 7, 2001, was non-detect for TSS, confirming that the February 19, 2001 sampling result was an anomaly. We will continue to explore what may have caused the exceedence.

Groundwater, Air Quality, Wetland, and Monitoring (B.7.)

The September 2000 Groundwater Monitoring Report was submitted to the Agencies on February 22, 2001. The November 2000 Groundwater Monitoring Report will be submitted to the Agencies during March. The next round of groundwater monitoring is scheduled for March 2001. It will consist of collecting water levels at the entire monitoring network and collecting groundwater samples for laboratory analysis from three upper aquifer wells and three lower aquifer wells.

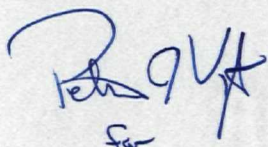
Residential Well Water Quality Monitoring (B.8.)

The next round of annual residential well monitoring is scheduled tentatively for September 2001.

The next monthly report will be forwarded to U.S. EPA and IDEM by April 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures: Baseline Schedule of Remedial Activities
Table 1 – Percent Complete for Remedial Tasks
Table 2.2 – Summary of Effluent Analytical Results - First Quarter 2001

cc: B. Magel
M. Travers
R. Adams

TMK/PJV/RAA
J:\209\0601 ACS\0202 MWA PM\msr\Mar01.doc
2090601.0202

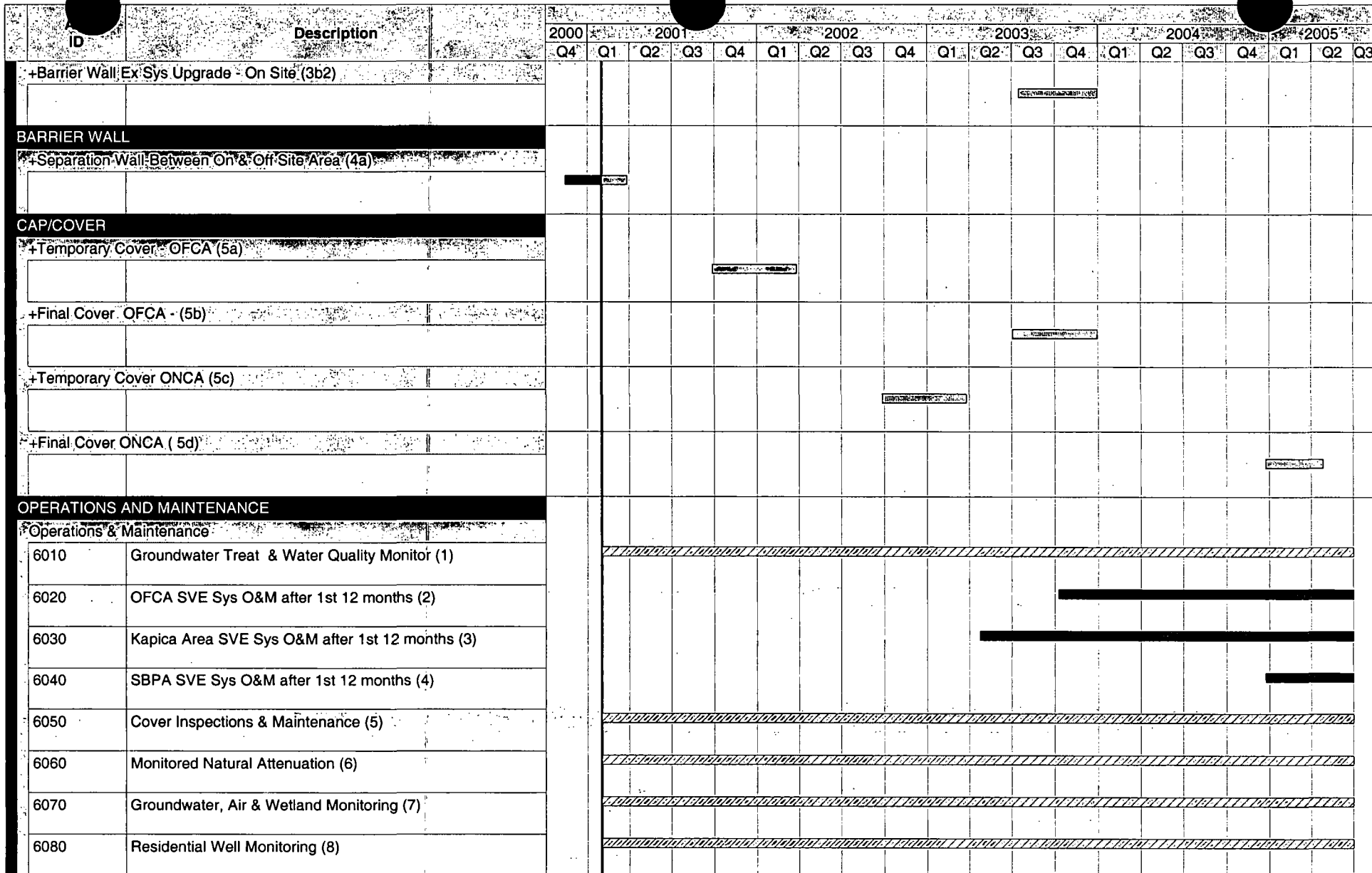
ID	Description	2000		2001				2002				2003				2004				2005	
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
SITE PREPARATION & CLEANUP																					
	+Close Fire Pond (1a)																				
	+Spoils Pile Consolidation (1b)																				
	+Drum Removal from ONCA (1c)																				
	+PCB Excavation from Wetland (1d)																				
IN-SITU SOIL VAPOR EXTRACTION																					
	+ISVE - OFCA (2a)																				
	+ISVE installation - K-P Area (2b)																				
	+O&M ISVE - K/P - 1st 12 months (2c2)																				
	+O&M ISVE - OFCA - 1st 12 months (2c1)																				
	+ISVE installation - SBPA (2d)																				
	+O&M ISVE - SBPA - 1st 12 months (2e)																				
DEWATERING																					
	+Upgrade Water Treatment Plant (3a)																				
	+Barrier Wall Ex Sys Upgrade - Off Site (3b1)																				

Start date 07/31/00
 Data date 02/01/01
 Run date 03/09/01
 Page number 1A
 Page count 2A
 Project name ACS1
 © Primavera Systems, Inc.

ACS NPL SITE REMEDIAL ACTION SCHEDULE
 Working Schedule
 02/01/01

Early bar
 Progress bar
 Critical bar
 Summary bar
 Progress point
 Critical point
 Summary point
 Start milestone point
 Finish milestone point





Start date 07/31/00
 Data date 02/01/01
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 Page number 2A
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ACS NPL SITE REMEDIAL ACTION SCHEDULE
 Working Schedule
 02/01/01

- Early bar
- Progress bar
- Critical bar
- Summary bar
- Progress point
- Critical point
- Summary point
- Start milestone point
- Finish milestone point



Table 1
Percentage Completed for Remedial Action Tasks
American Chemical Service
Griffith, Indiana

Task	Percent Completed Last Month - January 2001	Percent Completed This Month - February 2001	Total Percent Complete	Comments
Spoils Pile Consolidation (1.b.)	0%	0%	0%	
Drum Removal in On-Site Containment Area (1.c.)	0%	10%	10%	Drum delineation is complete
PCB Sediment Excavation from Wetland (1.d.)	0%	0%	0%	
Groundwater Plume Treatment (1.e.)	0%	0%	0%	
Groundwater Treatment Plant Upgrade (3.a.)	90%	5%	95%	
Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)	95%	5%	100%	
Barrier Wall Extraction System Upgrades (3.b.)	0%	50%	50%	
Temporary Engineered Cover of Off-Site Area (5.a.)	0%	0%	0%	

Note:

In future months, this table will be incorporated into the schedule

Table 2.2
Summary of Effluent Analytical Results - First Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event	Month 45	Effluent Limits	Lab Reporting Limits
Date	2/19/01		
pH	8.29	6-9	none
TSS	400	30	10
BOD	ND	30	2
Arsenic	ND	50	3.4
Beryllium	ND	NE	0.2
Cadmium	ND	4.1	0.3
Manganese	235	NE	10
Mercury	ND	0.02 (w/DL = 0.64)	0.1
Selenium	ND	8.2	4.3
Thallium	ND	NE	5.7
Zinc	ND	411	1.2
Benzene	ND	5	0.5
Acetone	ND	6,800	3
2-Butanone	ND	210	3
Chloromethane	ND	NE	0.5
1,4-Dichlorobenzene	ND	NE	0.5
1,1-Dichloroethane	ND	NE	0.5
cis-1,2-Dichloroethene	ND	70	0.5
Ethylbenzene	ND	34	0.5
Methylene chloride	ND	5	0.6
Tetrachloroethene	ND	5	0.5
Trichloroethene	ND	5	0.5
Vinyl chloride	ND	2	0.5
4-Methyl-2-pentanone	ND	15	3
bis (2-Chloroethyl) ether	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate	3 J	6	6
4 - Methylphenol	ND	34	10
Isophorone	ND	50	10
Pentachlorophenol	0.3 J	1	1
PCB/Aroclor-1016	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	0.00056 (w/DL = 0.1 to 0.9)	1.0*
PCB/Aroclor-1232	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD₅ data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Approved SW-846 method is incapable of achieving effluent limit.

Suffix Definitions:

J = Data qualifier added by laboratory

/ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias

UB = Analyte is not detected at or above the indicated concentration due to blank contamination

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value



April 9, 2001

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
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Region V, Mail Code SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – March 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001, and covers the activities undertaken at the Site during the month of March 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

The project specifications and final figures for this work have been completed and will be distributed to selected subcontractors. A Storm Water Pollution Prevention Plan is being created and will be maintained at the Site when completed. The spoil piles will be consolidated prior to installation of the interim engineered cover in the Off-Site Area; the interim cover will need to be placed before the installation of the ISVE system is started. The preliminary schedule is to begin fieldwork for the Spoils Pile Consolidation in the second quarter of 2001.

Drum Removal in On-Site Containment Area (1.c.)

Koester Environmental Services (KES) has been selected to perform the drum removal. Koester is the subcontractor who performed the pipe laying for the upgraded Barrier Wall Extraction System during the last few months. Fieldwork will begin after Montgomery

Watson has received and approved their work plan and health and safety plan. Koester is scheduled to begin mobilization during the week of April 16, 2001.

Construction of the drum staging pad, coordinated by Montgomery Watson, began on March 30, 2001, and was completed during the week of April 2, 2001.

PCB Sediment Excavation from Wetland (1.d.)

The fieldwork for the PCB Sediment Excavation program approved by the U.S. EPA is currently scheduled for summer 2001, when the water levels are expected to be at their lowest and the chance of inundation by surface water is lowest.

Groundwater Plume Treatment (1.e.)

Montgomery Watson has submitted a revised work plan for the previously proposed ORC[®] pilot study in the south area to the Agencies. Written agreements granting site access have been obtained from all property owners involved. Installation of the five new proposed piezometers will begin on April 2, 2001. After the wells have been developed and sampled for baseline values, the ORC[®] compound application will begin. We are currently planning to start the ORC[®] application during the week of April 9. The first month of sampling will then be conducted in May 2001.

Groundwater Treatment Plant Upgrade (3.a.)

The Groundwater Treatment Plant is currently treating water from the PCGS and BWES. The upgraded system is complete and working properly. Control debugging has been completed and the quality control checklist is finished. The catalytic oxidizer unit has been started up and has been working successfully since the last week of March. Optimization of the system is on-going.

Barrier Wall Extraction System Upgrades - Off-Site Area (3.b.)

Contract Dewatering Services has completed the installation of extraction wells EW-20, EW-20A, EW-20B, EW-19, EW-13A, EW-19A, and EW-19B. Extraction well EW-20C needs the cleanout installed for it to be complete. Final punchlists are currently being developed.

Koester Environmental Services, Inc. (KES) has installed and backfilled all required piping for the upgraded Off-Site BWES system.

Montgomery Watson has solicited the services of Austgen Electric to install underground power and communication cables for the BWES Upgrades in the Off-Site area. Austgen is the contractor that installed the electrical and instrumentation components of the Groundwater Treatment Plant Upgrades.

Interim pumps have been installed in some of the wells and the BWES in the Off-Site Area. Optimization, including installation of the final pumps and electrical power, will be conducted after installation of the temporary cover in the OFCA to decrease potential damage or interference with the final Off-Site BWES. Therefore, due to system

optimization and construction sequencing, this task will be shown on the Project Schedule extending beyond the anticipated baseline duration.

Temporary Engineered Cover of Off-Site Area (5.a.)

The installation of a temporary engineered cover over the Off-Site Area will be conducted in conjunction with the consolidation of the spoil piles. Montgomery Watson will be directing the installation of the cover. Work is scheduled to begin during mid-April. Dave's Tree Service has been subcontracted for tree removal and grubbing tasks. We expect the tree removal and grubbing will be finished in early April 2001.

PROJECT MANAGEMENT (6)

The remedial action schedule was submitted to the Agencies on February 9, 2001, the due date that the U.S. EPA established after the Consent Decree was entered. As required by the Consent Decree, a copy of the schedule and the percent complete for each task is included in this monthly status report. We are including a copy of the updated construction schedule, with all progress reflected. The current progress is shown on the attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

Periodic on-site construction meetings were held during March. Meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The groundwater treatment plant (GWTP) continued to treat water collected from the Perimeter Groundwater Containment System (PGCS). The Barrier Wall Extraction System (BWES) was turned off during the first three weeks of March while Koester completed the BWES piping installation. The BWES was turned on again during the third week of March 2001. Extraction well EW-11, located in the western portion of the Off-Site Area, is also being pumped into the GWTP. The GWTP began treating water pumped directly from the Firepond located in the ACS facility on March 9, and continued pumping for three weeks so that the Firepond was completely drained. The Firepond continues to be pumped periodically as it has time to recharge.

The effluent compliance sample was collected on March 5, 2001. The attached Table 2.2 summarizes the March compliance sampling results. No exceedences were reported. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, First Quarter 2001.

Groundwater, Air Quality, Wetland, and Monitoring (B.7.)

The November 2000 Groundwater Monitoring Report was submitted to the Agencies on March 14, 2001. First quarter groundwater monitoring was conducted on March 27 and 28, 2001. That sampling consisted of collecting water levels at the entire monitoring network and collecting groundwater samples for laboratory analysis from three upper aquifer wells and three lower aquifer wells. Laboratory results will be included in a future monthly status report.

Residential Well Water Quality Monitoring (B.8.)

The next round of annual residential well monitoring is tentatively scheduled for September 2001.

The next monthly report will be forwarded to U.S. EPA and IDEM by May 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON

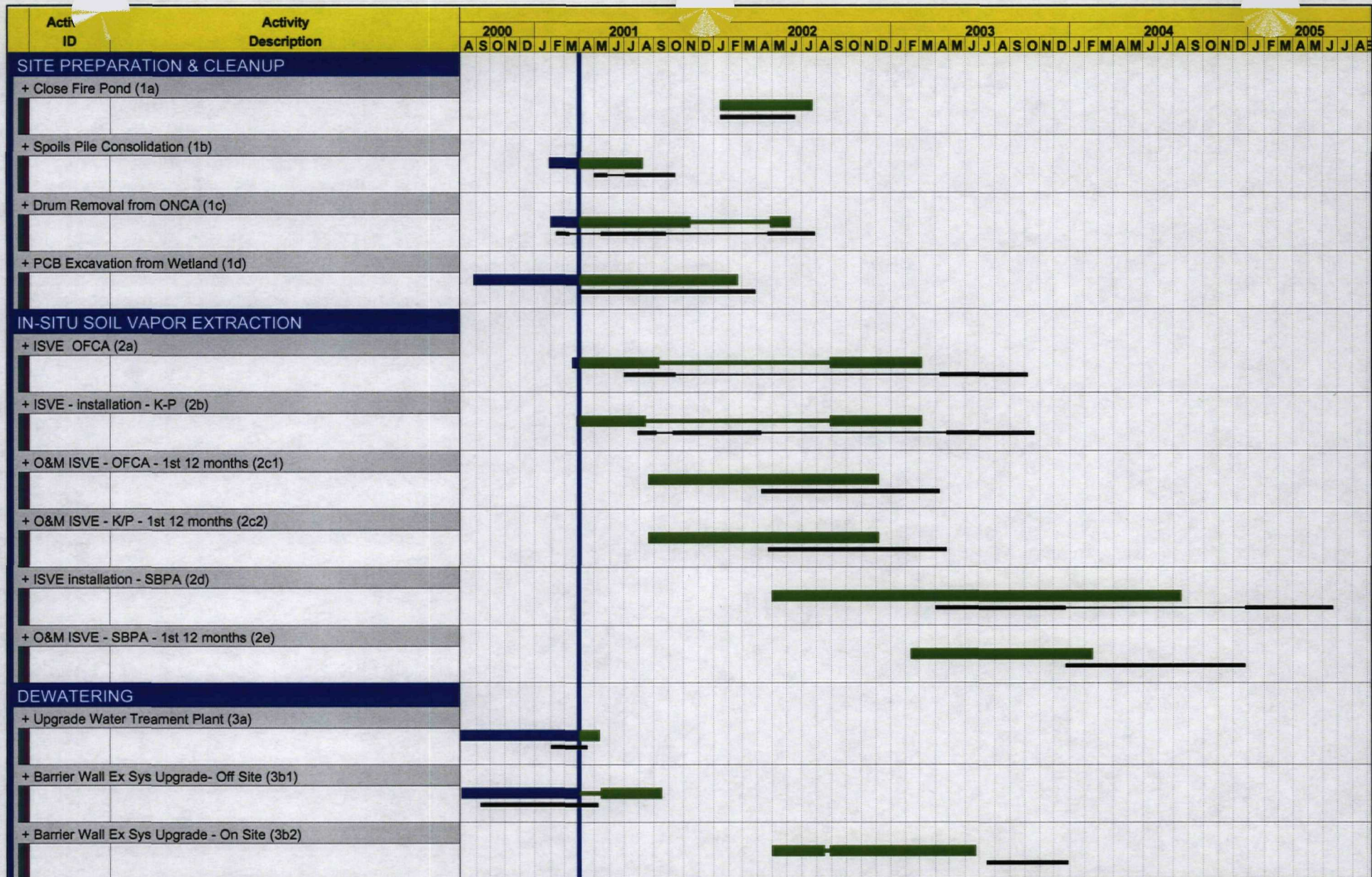


Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures: Updated Schedule of Remedial Activities
Table 2.2 – Summary of Effluent Analytical Results - First Quarter 2001

cc: B. Magel
M. Travers
R. Adams

TMK/PJV/TAL/jmf
J:\209\0601 ACS\0202 MWA PM\msr\Apr01.doc
2090601.0202



Data Date 02APR01
Run Date 03APR01 15:49

 Early Bar
 Target Bar
 Progress Bar
 Critical Activity

ACAA

Sheet 1 of 2

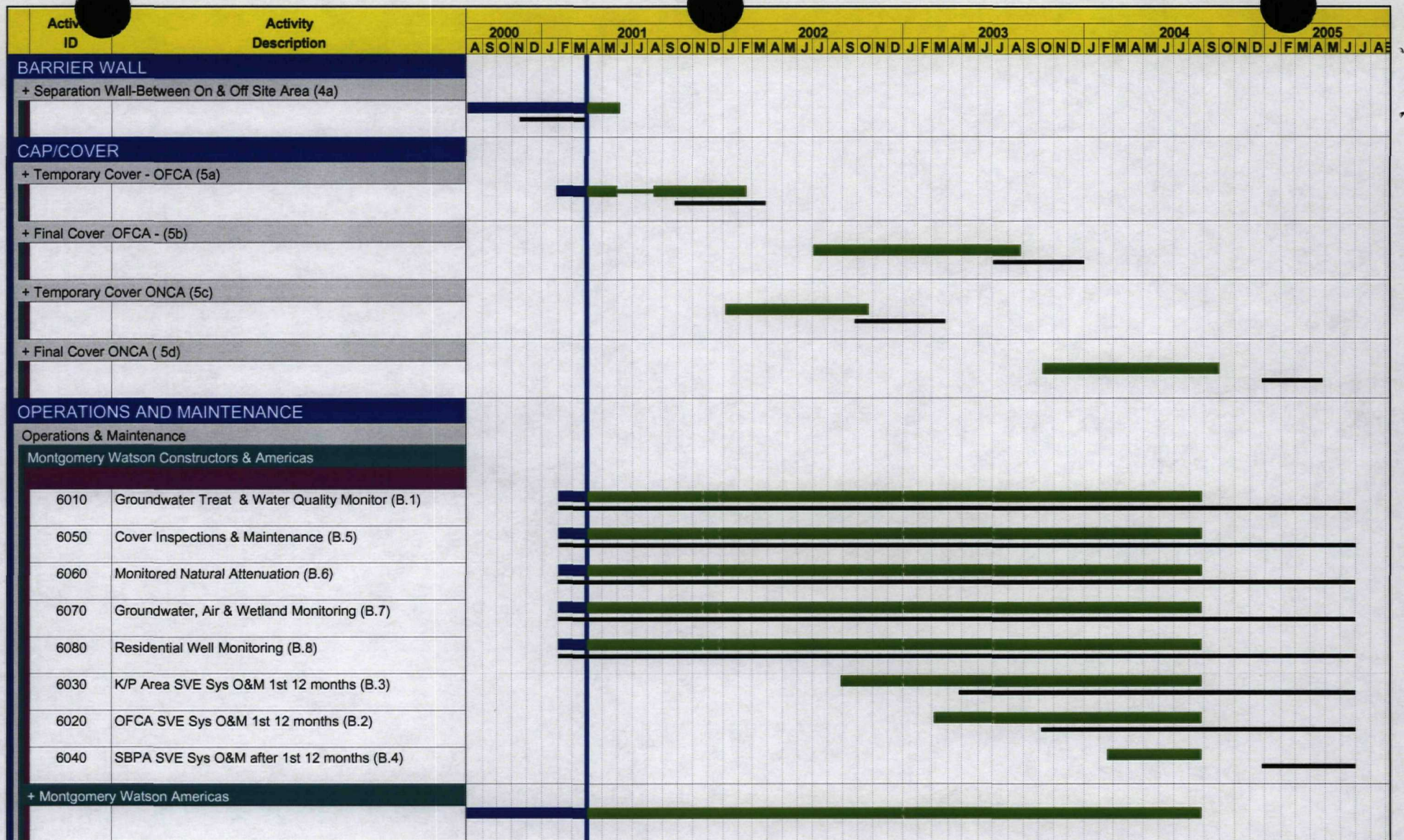
ACS NPL SITE REMEDIAL ACTION

Current Progress (Bar)
vs
CD Schedule (line)

End of March 2001 Report



Date	Revision	checked	approved



Data Date 02APR01
Run Date 03APR01 15:49

Early Bar
 Target Bar
 Progress Bar
 Critical Activity

ACAA

ACS NPL SITE REMEDIAL ACTION

Sheet 2 of 2

Current Progress (Bar)
vs
CD Schedule (line)

End of March 2001 Report



Date	Revision	checked	approved

Table 2.2
Summary of Effluent Analytical Results - First Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event	Month 46	Effluent Limits	Lab Reporting Limits
Date	3/5/01		
pH	8.24	6-9	none
TSS	ND	30	10
BOD	ND	30	2
Arsenic	ND	50	3.4
Beryllium	0.19 B/	NE	0.2
Cadmium	ND	4.1	0.3
Manganese	22,400	NE	10
Mercury	ND	0.02 (w/DL = 0.64)	0.1
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Zinc	ND	411	1.2
Benzene	ND	5	0.5
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MONTGOMERY WATSON

May 9, 2001

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, Mail Code SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – April 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the ACS NPL Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001, and covers the activities undertaken at the Site during the month of April 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

The project specifications and final figures for this work have been completed and will be distributed to selected subcontractors. The spoil piles and Investigation Derived Waste (IDW) drummed waste will be consolidated prior to installation of the interim engineered cover in the Off-Site Area; the interim cover will need to be placed before the installation of the ISVE system is started. A Task Memo for spoil and IDW management was submitted to U.S.EPA in April. The technical approaches have been approved by U.S. EPA and IDEM, and a task- and equipment-specific health and safety addendum will be submitted during May. The preliminary schedule is to begin fieldwork for the Spoils Pile Consolidation in the second quarter of 2001.

A Stormwater Pollution Prevention Plan (SWPPP) is being created and will be maintained at the Site when completed. The Plan will be available on site starting in May 2001. A Notice of Intent (NOI), required by the State of Indiana at construction sites of greater than 5 acres, will be submitted to IDEM during May, informing them of the spoils pile consolidation to take place.

Drum Removal in On-Site Containment Area (1.c.)

The Drum Removal pre-construction meeting was held at the Warrenville, Illinois offices of Montgomery Watson on Thursday, April 19, 2001. The U.S.EPA, IDEM, Black & Veatch, Montgomery Watson, and Koester Environmental Services (KES) participated in the meeting. The objective of the meeting was to go through the work plan and Health and Safety issues, and to provide a basis for Agency approval of both.

A construction kick-off meeting was held at the site among Montgomery Watson, the ACS facility, and KES, on April 23, 2001, the first day of mobilization. Health and Safety Training for the Drum Removal was conducted for all on-site personnel on April 25, 2001. The Health and Safety training was concluded by driving the route to the nearby hospital. Drum staging pad 1, including a verified grounding system for drum sampling, was ready for service on April 25, 2001.

Ground was broken on the excavation on April 26, 2001. The first drums were excavated on April 27, 2001. Drum sampling and characterization was initiated on April 30, 2001.

PCB Sediment Excavation from Wetland (1.d.)

The fieldwork for the PCB Sediment Excavation program approved by the U.S. EPA is currently scheduled for summer 2001, when the water levels are expected to be at their lowest and the chance of inundation by surface water is lowest. Coordinate locations for the excavation of the wetland excavation were staked out on April 9, 2001.

Groundwater Plume Treatment (1.e.)

Mid-America Drilling Company was selected to install the five new piezometers proposed for the South Area ORC[®] Pilot Study. These piezometers were installed on April 3 and 4, 2001. The wells were then developed and sampled for baseline values on April 10. Table 1 is attached summarizing the baseline results. Top Flight Environmental Drillers was selected to perform the ORC[®] injection. Injection of ORC[®] compound began on April 11, 2001 and will finish in early May 2001. The first month of post-application sampling is currently scheduled to occur before the end of May 2001.

In-Situ Vapor Extraction (ISVE) System for Off-Site Containment Area (2.a.)

Montgomery Watson has received an initial set of quotes from Oxidizer Unit 1 for the ISVE system. A lead time of 14 – 16 weeks is required for ordering Oxidizer Unit 1. We will be ordering the unit during May 2001, and also soliciting quotes for the Blower Shed for Oxidizer Unit 1. Shed construction and Oxidizer installation is on schedule to begin during the summer of 2001.

Groundwater Treatment Plant Upgrade (3.a.)

The Groundwater Treatment Plant is currently treating water from the PCGS and BWES. Approximately twenty percent of the influent comes from the PGCS, and eighty percent comes from the BWES. The upgraded system is complete and working properly. The GWTP currently processes and treats approximately 864,000 gallons of water each month. Flow through the system is expected to increase for ISVE dewatering. Because this task is now complete, it will not be listed in future monthly status reports.

Barrier Wall Extraction System Upgrades - Off-Site Area (3.b.)

Extraction well EW-19 has been completed. Extraction well EW-20C, has not yet been completed but is scheduled for completion when water levels are have been lowered to facilitate installing the cleanout.

Montgomery Watson has solicited the services of Austgen Electric to install underground power and communication cables for the BWES Upgrades in the Off-Site area. Austgen is the contractor that installed the electrical and instrumentation components of the Groundwater Treatment Plant Upgrades.

Interim pumps have been installed in some of the wells and the BWES in the Off-Site Area. After achieving the base grades for the Off-Site cover we will install the final extraction pumps, power systems and controllers.

Due to this construction sequencing, this task will be shown on the Project Schedule extending beyond the anticipated baseline duration. The extraction capacity will be performing at full capacity, but we will not be showing the job complete on the schedule, until we have completed optimization.

Temporary Engineered Cover of Off-Site Area (5.a.)

The installation of a temporary engineered cover over the Off-Site Area will be conducted in conjunction with the consolidation of the spoil piles. Montgomery Watson will be directing the installation of the cover. Work is scheduled to begin during mid-May. Dave's Tree Service cleared and grubbed the Off-Site area of trees and brush during the weeks of March 26, and April 2, 2001.

PROJECT MANAGEMENT (6)

The remedial action schedule was submitted to the Agencies on February 9, 2001, the due date that the U.S. EPA established after the Consent Decree was entered. As required by the Consent Decree, a copy of the schedule and the percent complete for each task is included in this monthly status report. We are including a copy of the updated construction schedule, with all progress reflected. The current progress is shown on the attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

On-site construction meetings were held on April 12 and April 26, 2001. The April 19 construction meeting was held in the Warrenville, Illinois offices of Montgomery Watson. Meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The groundwater treatment plant (GWTP) treated water collected from both the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES) during April. Water from the On-Site pond, previously the Fire pond, continues to be pumped to the GWTP every three days in order to continue dewatering the On-Site Area.

The effluent compliance sample was collected on April 9, 2001. The attached Table 2.2 summarizes the April compliance sampling results. No exceedences were reported. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, Second Quarter 2001.

Groundwater, Air Quality, Wetland, and Monitoring (B.7.)

First quarter groundwater monitoring was conducted on March 27 and 28, 2001. That sampling consisted of collecting water levels at the entire monitoring network and collecting groundwater samples for laboratory analysis from three upper aquifer wells and three lower aquifer wells. Validated laboratory results are attached to this monthly status report.

On April 2, 5, and 6, 2001, monitoring well ATMW-4D was abandoned due to potential leaking into the lower aquifer. It was replaced with a new monitoring well, MW-55.

The March 2001 Groundwater Monitoring Report will be submitted to the Agencies during May or June 2001. The next round of groundwater monitoring is scheduled for June 2001.

Residential Well Water Quality Monitoring (B.8.)

The next round of annual residential well monitoring is tentatively scheduled for September 2001.

The next monthly report will be forwarded to U.S. EPA and IDEM by June 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON

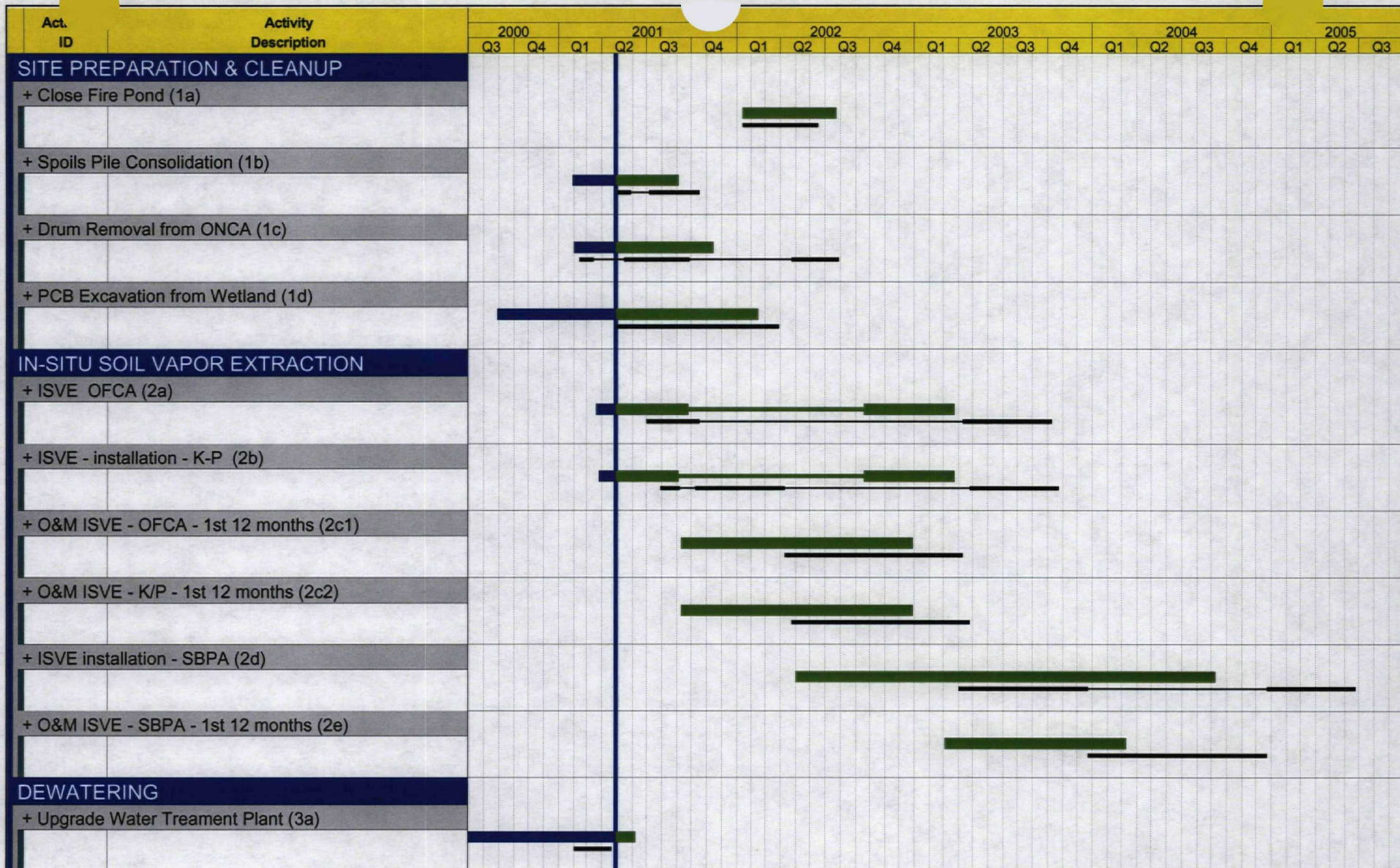


For Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures: Updated Schedule of Remedial Activities
Table 2.2 – Summary of Effluent Analytical Results - Second Quarter 2001
Table – Comparison of Results to Baseline Highest Detections – March
2001 (VOCs and Inorganics)
Table 1 – ORC® South Area Analytical Results – April 2001

cc: B. Magel
M. Travers
R. Adams

TMK/PJV/TAL/RAA/jmf
J:\209\0601 ACS\0202 MWA PM\msr\May01.doc
2090601.0202



Data Date 30APR01
Run Date 07MAY01 15:41

 Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAB

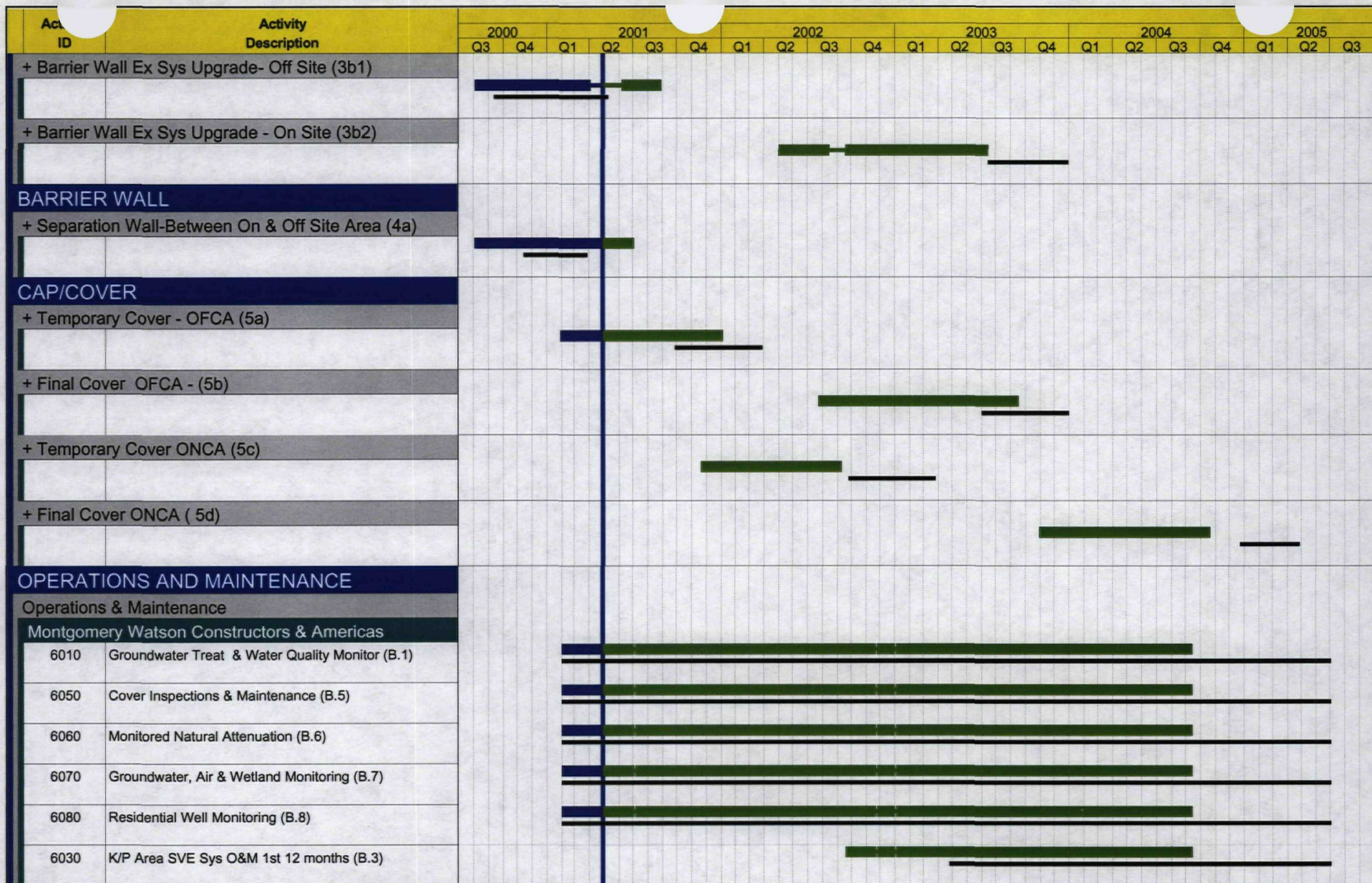
ACS NPL SITE REMEDIAL ACTION

Sheet 1 of 3

Current Progress (Bar)
 vs
 CD Schedule (line)
 End of April 2001 Report



Date	Revision	checked	approved



Data Date 30APR01
Run Date 07MAY01 15:41

[Green Bar] Early Bar
[Black Bar] Target 1
[Blue Bar] Progress Bar
[Red Bar] Critical Activity

ACAB

ACS NPL SITE REMEDIAL ACTION

Sheet 2 of 3

Current Progress (Bar)
vs
CD Schedule (line)
End of April 2001 Report



Date	Revision	checked	approved

Act ID	Activity Description	2000		2001			2002				2003			2004				2005		
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		
6020	OFCA SVE Sys O&M 1st 12 months (B.2)																			
6040	SBPA SVE Sys O&M after 1st 12 months (B.4)																			
+ Montgomery Watson Americas																				
MANAGEMENT																				
+ MWA Management																				

Data Date 30APR01
Run Date 07MAY01 15:41

 Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAB

ACS NPL SITE REMEDIAL ACTION

Sheet 3 of 3

Current Progress (Bar)
 vs
 CD Schedule (line)
 End of April 2001 Report



Date	Revision	checked	approved

Table 2.2
Summary of Effluent Analytical Results - Second Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event	Month 47	Effluent Limits	Lab Reporting Limits
Date	4/9/01		
pH	7.54	6-9	none
TSS	ND	30	10
BOD	ND	30	2
Arsenic	ND	50	3.4
Beryllium	ND	NE	0.2
Cadmium	ND	4.1	0.3
Manganese	237	NE	10
Mercury	ND	0.02 (w/DL = 0.64)	0.1
Selenium	ND	8.2	4.3
Thallium	ND	NE	5.7
Zinc	4.7 B/	411	1.2
Benzene	ND	5	0.5
Acetone	ND	6,800	3
2-Butanone	ND	210	3
Chloromethane	ND	NE	0.5
1,4-Dichlorobenzene	ND	NE	0.5
1,1-Dichloroethane	ND	NE	0.5
cis-1,2-Dichloroethene	ND	70	0.5
Ethylbenzene	ND	34	0.5
Methylene chloride	0.6	5	0.6
Tetrachloroethene	ND	5	0.5
Trichloroethene	ND	5	0.5
Vinyl chloride	ND	2	0.5
4-Methyl-2-pentanone	ND	15	3
bis (2-Chloroethyl) ether	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate	ND	6	6
4 - Methylphenol	ND	34	10
Isophorone	ND	50	10
Pentachlorophenol	0.11 J/	1	1
PCB/Aroclor-1016	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD₅ data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Approved SW-846 method is incapable of achieving effluent limit.

Suffix Definitions:

J/ = Data qualifier added by laboratory

J_ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias

UB = Analyte is not detected at or above the indicated concentration due to blank contamination

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

Comparison of Results to Baseline Highest Detections

March 2001

American Chemical Services NPL Site

Griffith, Indiana

Well	Analyte	Units	Highest Detect during Baseline	Current Event			
				Result	LQ	DQ	Detect Limit
ATMW-4D	1,1,1-Trichloroethane	UG/L		100	U		100
ATMW-4D	1,1,2-Trichloroethane	UG/L		100	U		100
ATMW-4D	1,1-Dichloroethene	UG/L		100	U		100
ATMW-4D	Benzene	UG/L		1,800			100
ATMW-4D	Chloroethane	UG/L		42	J		100
ATMW-4D	cis-1,2-Dichloroethene	UG/L		100	U		100
ATMW-4D	Tetrachloroethene	UG/L		100	U		100
ATMW-4D	trans-1,2-Dichloroethene	UG/L		100	U		100
ATMW-4D	Trichloroethene	UG/L		100	U		100
ATMW-4D	Vinyl chloride	UG/L		100	U		100
MW-06	1,1,1-Trichloroethane	UG/L	50	10	U		10
MW-06	1,1,2-Trichloroethane	UG/L	50	10	U		10
MW-06	1,1-Dichloroethene	UG/L	50	10	U		10
MW-06	Benzene	UG/L	320	2,000	D		100
MW-06	Chloroethane	UG/L	720	270	D		100
MW-06	cis-1,2-Dichloroethene	UG/L		10	U		10
MW-06	Tetrachloroethene	UG/L	50	10	U		10
MW-06	trans-1,2-Dichloroethene	UG/L		10	U		10
MW-06	Trichloroethene	UG/L	50	10	U		10
MW-06	Vinyl chloride	UG/L	50	10	U		10
MW-09R	1,1,1-Trichloroethane	UG/L	200	10	U		10
MW-09R	1,1,2-Trichloroethane	UG/L	200	10	U		10
MW-09R	1,1-Dichloroethene	UG/L	200	10	U		10
MW-09R	Benzene	UG/L	310	41			10
MW-09R	Chloroethane	UG/L	2,900	360	D		33
MW-09R	cis-1,2-Dichloroethene	UG/L		10	U		10
MW-09R	Tetrachloroethene	UG/L	200	10	U		10
MW-09R	trans-1,2-Dichloroethene	UG/L		10	U		10
MW-09R	Trichloroethene	UG/L	200	10	U		10
MW-09R	Vinyl chloride	UG/L	200	10	U		10
MW-10C	1,1,1-Trichloroethane	UG/L	150	10	U		10
MW-10C	1,1,2-Trichloroethane	UG/L	150	10	U		10
MW-10C	1,1-Dichloroethene	UG/L	150	10	U		10
MW-10C	Benzene	UG/L	150	410	D		33
MW-10C	Chloroethane	UG/L	420	190			10
MW-10C	cis-1,2-Dichloroethene	UG/L		10	U		10
MW-10C	Tetrachloroethene	UG/L	150	10	U		10
MW-10C	trans-1,2-Dichloroethene	UG/L		10	U		10
MW-10C	Trichloroethene	UG/L	150	10	U		10
MW-10C	Vinyl chloride	UG/L	129	10	U		10
MW-48	1,1,1-Trichloroethane	UG/L	500	100	U		100
MW-48	1,1,2-Trichloroethane	UG/L	500	100	U		100
MW-48	1,1-Dichloroethene	UG/L	500	100	U		100
MW-48	Benzene	UG/L	9,500	2,000	D		170
MW-48	Chloroethane	UG/L	1,000	78	J		100
MW-48	cis-1,2-Dichloroethene	UG/L		100	U		100

BOLD = Exceedance

NA = Not Applicable

Page 1

CAS/cas/

J:\209\0603 ACS\Databases\2000\ACS GW.mdb[rptNewResultsVOC]

2090603.030401

Comparison of Results to Baseline Highest Detections

March 2001

American Chemical Services NPL Site

Griffith, Indiana

Well	Analyte	Units	Highest Detect during Baseline	Current Event			
				Result	LQ	DQ	Detect Limit
MW-48	Tetrachloroethene	UG/L	500	100	U		100
MW-48	trans-1,2-Dichloroethene	UG/L		100	U		100
MW-48	Trichloroethene	UG/L	500	100	U		100
MW-48	Vinyl chloride	UG/L	500	100	U		100
MW-49	1,1,1-Trichloroethane	UG/L	500	50	U		50
MW-49	1,1,2-Trichloroethane	UG/L	500	50	U		50
MW-49	1,1-Dichloroethene	UG/L	500	50	U		50
MW-49	Benzene	UG/L	6,750	900			50
MW-49	Chloroethane	UG/L	715	120			50
MW-49	cis-1,2-Dichloroethene	UG/L		50	U		50
MW-49	Tetrachloroethene	UG/L	500	50	U		50
MW-49	trans-1,2-Dichloroethene	UG/L		50	U		50
MW-49	Trichloroethene	UG/L	500	50	U		50
MW-49	Vinyl chloride	UG/L	500	50	U		50

BOLD = Exceedance

NA = Not Applicable

Page 2

CAS/cas/

J:\209\0603 ACS\Databases\2000\ACS GW.mdb[rptNewResultsVOC]

2090603.030401

Comparison of Results to Baseline Highest Detections
March 2001
American Chemical Services NPL Site
Griffith, Indiana

Well	Analyte	Units	Highest Detect during Baseline	Current Event			
				Result	LQ	DQ	Detect Limit
MW-06	Arsenic	UG/L	72	125			10
MW-06	Lead	UG/L	9.6	1.7	U		1.7
MW-09R	Arsenic	UG/L	6.8	4.2	U		4.2
MW-09R	Lead	UG/L	6.7	1.7	U		1.7
MW-48	Arsenic	UG/L	13	6.8	B		10
MW-48	Lead	UG/L	7.7	1.7	U		1.7
MW-49	Arsenic	UG/L	38	7.8	B		10
MW-49	Lead	UG/L	4.4	1.7	U		1.7

BOLD = Exceedance

NA = Not Applicable

Page 1

Table 1. ORC South Area Analytical Results
ACS NPL Site

ORCPZ101	Apr-01	May-01	Jun-01
Benzene	410		
Chloroethane	56		
Ethylbenzene	460		
Methylene Chloride	8 J		
Isopropylbenzene	21 J		
Xylene	3100 E		

ORCPZ102	Apr-01	May-01	Jun-01
Benzene	650		
Chloroethane	200		
Ethylbenzene	16 J		
Methylene Chloride	18 J		
Isopropylbenzene			
Xylene	310		

ORCPZ103	Apr-01	May-01	Jun-01
Benzene	800		
Chloroethane	73		
Ethylbenzene	14 J		
Methylene Chloride	12 J		
Isopropylbenzene			
Xylene	470		

ORCPZ104	Apr-01	May-01	Jun-01
Benzene	5 J		
Chloroethane	5 J		
Ethylbenzene			
Methylene Chloride	1 J		
Isopropylbenzene			
Xylene	50		

ORCPZ105	Apr-01	May-01	Jun-01
Benzene	590		
Chlorobenzene	68		
Chloroethane	130		
1,2-Dichlorobenzene	12 J		
1,4-Dichlorobenzene	49 J		
Ethylbenzene	3100 E		
Methylene Chloride	9 J		
Methylcyclohexane	28 J		
Isopropylbenzene	58		
Toluene	63		
Xylene	17000 E		

Notes:

All concentrations in ug/L

Blank cells indicate parameter was not detected above detection limits

J - Indicates an estimated concentration. Analyte was detected below reporting limits.

E - Analyte concentration exceeded upper calibration limits of instrument.

Due to lab error, sample was not diluted and re-run.



MONTGOMERY WATSON

June 8, 2001

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, Mail Code SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – May 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the American Chemical Services, Inc. (ACS) National Priority List (NPL) Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001, and covers the activities undertaken at the Site during the month of May 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

A task- and equipment-specific health and safety plan addendum for the consolidation of spoils piles in the Off-Site Area was submitted May 14, 2001 to the Agencies. The addendum addressed debris-shearing equipment. The Stormwater Pollution Prevention Plan (SWPPP) was created and is being maintained at the Site as required by Indiana Department of Environmental Management (IDEM). The Plan was available on site starting on May 10, 2001. Also on May 10th, a Notice of Intent (NOI), required by the State of Indiana at construction sites of greater than 5 acres, was submitted to Sean Grady of IDEM for work in the Off-Site Area.

In accordance with the Environmental Protection Agency (EPA) -approved plan, the Investigation Derived Waste (IDW) drummed waste and Kapica Pazmey waste piles were sheared into manageable pieces and relocated in a low area that requires some fill to reach final grades on the north side of the Off-Site Area during May 15-25, 2001. Re-grading of the poly-chlorinated biphenyls (PCB) and volatile organic compound (VOC) spoils piles was begun on May 29, 2001 and completed on May 31, 2001. Midwest Environmental, Inc. (MEI) conducted this work. These piles are to be consolidated prior to installation of the interim engineered cover over the Off-Site Area; the interim cover will need to be placed before the installation of the In-Situ Vapor Extraction (ISVE) system is started. The spoil management task is being performed in conjunction with the installation of the Temporary Engineered Cover of the Off-Site Area. The temporary cover is not yet complete, however the spoils piles have been consolidated. The construction of this task is complete, and the completion documentation and drawings are being compiled.

Drum Removal in On-Site Containment Area (1.c.)

Ground was broken on the excavation of buried drums in the On-Site Area on April 26, 2001. Koester Environmental Services (KES) excavated the first drums on April 27, 2001. Drum sampling and characterization was initiated on April 30, 2001. Excavation was completed in Area A on May 14 and in Area B on May 24, 2001. KES completed decontamination and demobilization procedures and left the Site on May 31, 2001.

During the six-week event 1,698 drums were removed from the ground from within the delineated areas. Two hundred and forty-nine drums were placed in 85-gallon overpack drums. These were subsequently sampled and analyzed on site according to the Hazcat parameters outlined in the work plan. The remaining 1,449 drums were determined to be degraded drums or drum carcasses and were placed into roll-off boxes for later sampling and disposal. In addition 2,496 cubic yards of visually impacted soil from the excavation were placed in the firepond. Survey verification of this amount is pending.

The overpacked drums and roll-off boxes are currently being stored on site as disposal options are evaluated. The overpacked drums are being stored on the drum containment pad. Preliminary disposal information indicates that the degraded drums which have been placed into roll-off boxes will be processed or sorted on Site and placed back into the roll-off containers for disposal. Notification of disposal plans will be forwarded to the United States Environmental Protection Agency (U.S.EPA) and IDEM when they are determined. Montgomery Watson will work together with U.S.EPA and IDEM for timely management, disposal, and compliance with applicable regulations.

PCB Sediment Excavation from Wetland (1.d.)

The fieldwork for the PCB Sediment Excavation program approved by the U.S. EPA is currently scheduled for summer 2001, when the water levels are expected to be at their lowest and the chance of inundation by surface water is lowest.

Groundwater Plume Treatment (1.e.)

The first round of post-application groundwater sampling of the five piezometers of the South Area ORC[®] Pilot Study was conducted on May 22, 2001. Analytical data has not yet been received from the laboratory, but will be included in a future monthly status report. The June 2001 round of ORC[®] South Area Pilot Study sampling will be conducted during the regular June 2001 Groundwater Long-Term Groundwater Monitoring event currently scheduled for the week of June 18, 2001.

In-Situ Vapor Extraction (ISVE) System for Off-Site Containment Area (2.a.)

Montgomery Watson ordered Oxidizer Unit 1 for the ISVE system on May 23, 2001. A lead time of 14 – 16 weeks is expected for the unit to arrive. We have solicited quotes for the Blower Shed for Oxidizer Unit 1 and will place an order by late May. Shed construction and Oxidizer installation is scheduled to begin during the summer of 2001. ISVE well installation is also scheduled to occur during the summer of 2001.

Barrier Wall Extraction System (BWES) Upgrades - Off-Site Area (3.b.)

After the completion of the temporary cover in the Off-Site Area, an electrical contractor will install a permanent power system for the Barrier Wall Extraction System (BWES) system by running electrical and communication cables from the Groundwater Treatment Plant to the blowershed location. At the blowershed, a motor control center will be constructed in July 2001.

Interim pumps have been installed in some of the extraction wells in the Off-Site Area. After achieving the base grades for the Off-Site cover, we will install the final extraction pumps. Extraction well EW-20C has not yet been completed but is scheduled for completion when water levels have been lowered to facilitate installing the cleanout.

Due to this construction sequencing, this task will be shown on the Project Schedule extending beyond the anticipated baseline duration. The extraction capacity will be performing at full capacity, but we will not be showing the job complete on the schedule, until we have completed optimization.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

As mentioned in previous monthly status reports, the construction of the Separation Barrier Wall is complete. The completion documentation and drawings are still being compiled.

Temporary Engineered Cover of Off-Site Area (5.a.)

The installation of a temporary engineered cover over the Off-Site Area is being conducted in conjunction with the consolidation of the spoil piles. A detention basin was constructed during May 15-25, 2001, and swales leading to the basin are currently being constructed. Re-grading of the Off-Site Area began on May 29, 2001. Sub-base grading was started. The existing clay thickness over the site was re-surveyed and mapped. Area Survey will create a new contour map of the Off-Site Area which will be overlaid onto the existing clay cover map. We will confirm areas which may already contain sufficient clay and which

regions will need additional clay. Imported clay will begin arriving on the Site during the week of June 4, 2001. The Temporary Engineered Cover will be complete by the end of July 2001.

PROJECT MANAGEMENT (6)

The remedial action schedule was submitted to the Agencies on February 9, 2001, the due date that the U.S. EPA established after the Consent Decree was entered. As required by the Consent Decree, a copy of the schedule and the percent complete for each task is included in this monthly status report. We are including a copy of the updated construction schedule with all progress reflected. The current progress is shown on the attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

On-site construction meetings were held on May 3, 10, 17, 24, and 31, 2001. Meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The groundwater treatment plant (GWTP) treated water collected from both the Perimeter Groundwater Containment System (PGCS) and BWES during May. At least ninety percent of the influent comes from the BWES and less than ten percent from the PGCS at this time. During the drum removal activity, the firepond was used as a surge capacity for dewatering the drum excavation area. The use of the firepond as a pumping source for the GWTP will be discontinued now that the drum excavation is complete. The On-Site Area BWES extraction wells will continue to manage the water levels inside the barrier wall.

The drum removal generated the most highly contaminated influent to date for the GWTP. In order to treat the water, the large biological zone in the Activated Sludge Plant was put on line. We continue to use it and expect to bring the Off-Site BWES wells to full capacity by the end of July 2001 when the interim cap is completed and permanent electrical lines have been run to the wells.

The effluent compliance sample for the GWTP was collected on May 31, 2001. The analytical data has not yet been received from the laboratory, but will be included in a future monthly status report. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, Second Quarter 2001.

Groundwater, Air Quality, Wetland, and Monitoring (B.7.)

On April 19, 2001 the new monitoring well, MW-56, which replaced ATMW-4D, was sampled. No detections were indicated in the laboratory report. Tables 7 and 8, which are attached to this report, summarize the benzene and chloroethane analytical results for all lower aquifer wells for the March 2001 sampling event. The April 2001 sampling of MW-56 is included in the March 2001 results, even though it was not installed until April. The other data included in Tables 7 and 8 was already reported in last month's status report.

The March 2001 Groundwater Monitoring Report will be submitted to the Agencies during June 2001. The next round of groundwater monitoring is scheduled for the week of June 18, 2001. It will consist of collecting water levels and groundwater samples for the entire monitoring network, including the ORC[®] South Area Pilot Study piezometers.

Residential Well Water Quality Monitoring (B.8.)

The next round of annual residential well monitoring is tentatively scheduled for September 2001.

The next monthly report will be forwarded to U.S. EPA and IDEM by July 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON



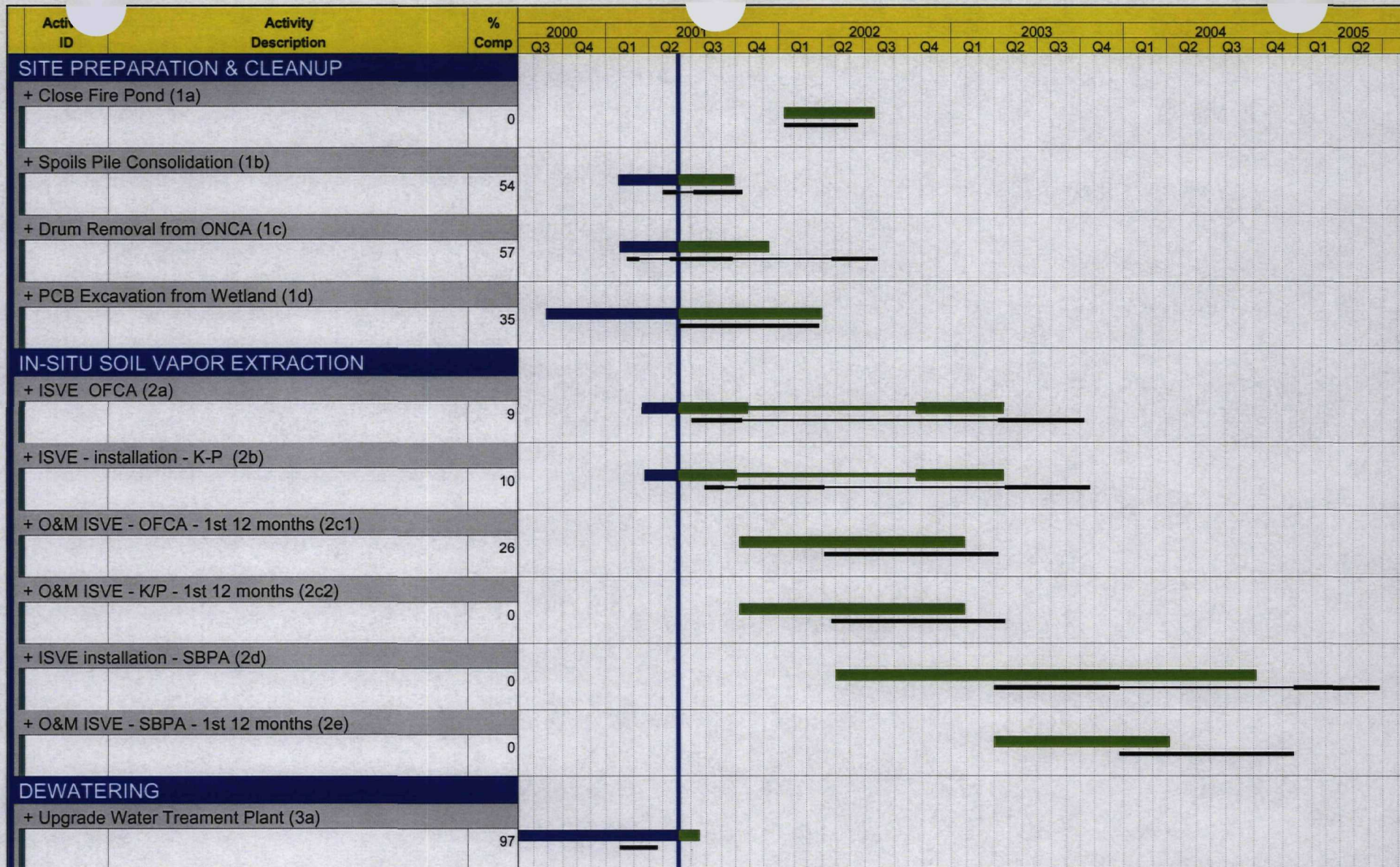
Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures: Updated Schedule of Remedial Activities

Tables 7 and 8 – Analytical Results for MW-56 and other Lower Aquifer
Wells–March/April 2001 (VOCs: Benzene and Chloroethane)

cc: B. Magel
M. Travers
R. Adams

TMK/PJV/TAL/jmf
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Data Date 04JUN01
Run Date 07JUN01 08:04

Early Bar
Target 1
Progress Bar
Critical Activity

ACAC

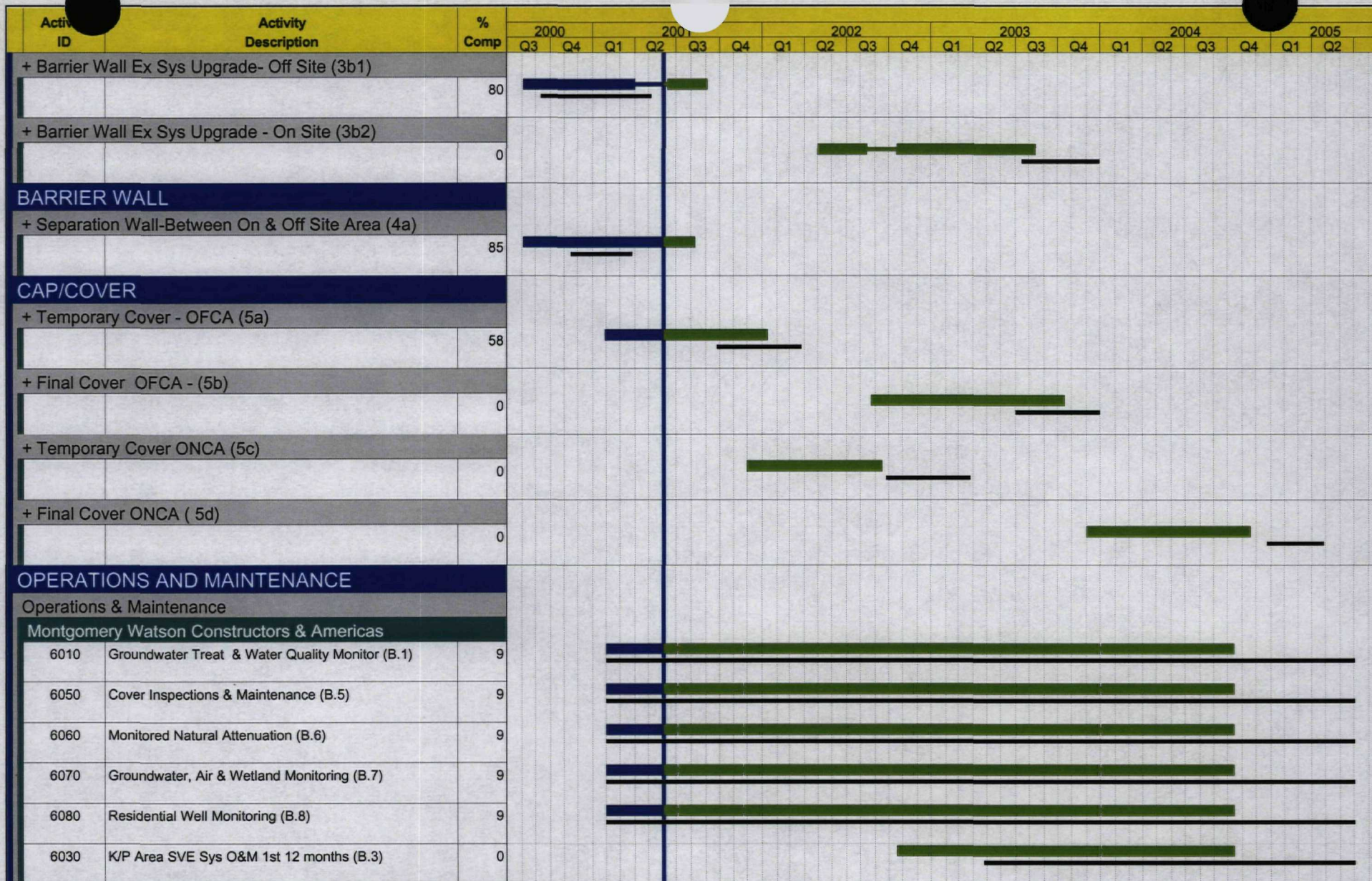
ACS NPL SITE REMEDIAL ACTION

Sheet 1 of 3

Current Progress (Bar)
vs
CD Schedule (line)
End of May 2001 Report



Date	Revision	checked	approved



Data Date 04JUN01
Run Date 07JUN01 08:04

Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAC

ACS NPL SITE REMEDIAL ACTION

Sheet 2 of 3

Current Progress (Bar)
 vs
 CD Schedule (line)
 End of May 2001 Report



Date	Revision	checked	approved

Activity ID	Activity Description	% Comp	2000		2001		2002		2003		2004		2005	
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
6020	OFCA SVE Sys O&M 1st 12 months (B.2)	0												
6040	SBPA SVE Sys O&M after 1st 12 months (B.4)	0												
+ Montgomery Watson Americas														
		17												
MANAGEMENT														
+ MWA Management														
		23												

Data Date 04JUN01
Run Date 07JUN01 08:04

 Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAC Sheet 3 of 3

ACS NPL SITE REMEDIAL ACTION

Current Progress (Bar)
 vs
 CD Schedule (line)
 End of May 2001 Report



Date	Revision	checked	approved

**Summary of Organic Compound Detections in the Upper Aquifer
Validated Results - March 2001
American Chemical Service NPL Site
Griffith, Indiana**

Parameter	MW-06		MW-48		MW-49		
	Mar-01	BV	Mar-01	BV	Mar-01	BV	
VOCs (ug/L)							
Benzene	2,000	D/ 320	2,000	D/ 320	9,500	900	6,750
Chloroethane	270	D/ 720	78	J/ 720	1,000	120	715

Notes:

ug/L = micrograms per liter

BV = Baseline Value

J/_ = Data qualifier added by laboratory

_J = Data qualifier added by data validator

D = Results based on diluted sample

J = Estimated value

A blank cell indicates the parameter was not detected.

Bold result indicates an exceedance of BV

Table 8
Summary of Organic Compound Detections in the Lower Aquifer
Validated Results - March 2001
American Chemical Service NPL Site
Griffith, Indiana

Parameter	ATMW4D			MW-09R		MW-10C		MW56	
	Mar-01	BV		Mar-01	BV	Mar-01	BV	Apr-01	BV
VOCs (ug/L)									
Benzene	1,800	D/	NS	41	310	410	D/	150	NS
Chloroethane	42		NS	360	D/ 2,900	190		420	NS

Notes:

ug/L = micrograms per liter.

BV = Baseline Value

NS = Not sampled

J/_ = Data qualifier added by laboratory

_/J = Data qualifier added by data validator

D = Results based on diluted sample

J = Estimated value

A blank cell indicates parameter not detected.

Bold result indicates an exceedance of BV

**MWH**

MONTGOMERY WATSON HARZA

July 9, 2001

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, Mail Code SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – June 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the American Chemical Services, Inc. (ACS) National Priority List (NPL) Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001, and covers the activities undertaken at the Site during the month of June 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

The spoils piles located in the Off-Site Area were consolidated during May 2001, as reported in last month's status report. Midwest Environmental, Inc. (MEI) completed placing a clay layer over all of the consolidated piles on June 12, 2001. The completion documentation and drawings will be compiled in conjunction with the documentation for the Off-Site Area interim cover and submitted to the United States Environmental Protection Agency (U.S.EPA) and the Indiana Department of Environmental Management (IDEM).

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A database has been created of hazcat results for each sample collected during the drum removal. A sampling plan is being written to outline which samples are to be consolidated together and sent to a fixed laboratory for analysis for disposal purposes. Notification of disposal plans will be forwarded to the U.S.EPA and IDEM as soon as they are determined. MWH will work together with U.S.EPA and IDEM for timely management, disposal, and compliance with applicable regulations.

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The fieldwork for the PCB Sediment Excavation program approved by the U.S. EPA has been scheduled for the end of July 2001, when the water levels were expected to be at their lowest and the chance of inundation by surface water would therefore be lowest. Due to a very wet month of June, that schedule may be delayed a few weeks while the wetland water levels are reduced. Discharge from the GWTP has been redirected to south of the railroad tracks instead of the wetlands. This will help to lower water levels in the wetlands and aid in the sediment excavation process.

Groundwater Plume Treatment (1.e.)

The second round of groundwater sampling of the five piezometers of the South Area ORC[®] Pilot Study was conducted on May 22, 2001. This was the first round of sampling conducted after the ORC[®] application. A map showing the observation well locations and a table summarizing the analytical data from that sampling round are attached. The final validated data will be included in the South Area ORC[®] Pilot Study report at the end of the pilot study.

The June 2001 round of ORC[®] South Area Pilot Study sampling was conducted on June 29, 2001 in conjunction with the regular June 2001 Long-Term Groundwater Monitoring. The analytical results will be included in a future monthly status report.

In-Situ Vapor Extraction (ISVE) System for Off-Site Containment Area (2.a.)

The Request for Bid (RFB) for the installation of the ISVE wells for the Off-Site Area was sent to prospective bidders the week of June 16, 2001. A pre-bid site walk meeting was held on June 26, 2001 at the Site. MWH has solicited quotes for the Blower Shed and Thermal Oxidizer/Scrubber Unit 1. The thermal oxidizer/scrubber was ordered on May 23,

2001, as reported last month, and the blower shed will be ordered during the first week of July 2001.

Shed construction and oxidizer installation, are scheduled to begin during the summer of 2001. ISVE well installation is also scheduled to occur during the summer of 2001.

Barrier Wall Extraction System (BWES) Upgrades - Off-Site Area (3.b.)

After the completion of the temporary cover in the Off-Site Area, an electrical contractor will install a permanent power system for the Barrier Wall Extraction System (BWES) by running electrical and communication cables from the Groundwater Treatment Plant to the blower shed location. A motor control center will be constructed at the blower shed in July 2001.

Interim pumps have been installed in some of the extraction wells in the Off-Site Area. These will be replaced with permanent pumps after achieving the base grades for the Off-Site cover. Contract Dewatering Services (CDS) will mobilize the week of July 9, 2001 to complete the cleanout portion of extraction well EW-20C.

Due to this construction sequencing, this task is being shown on the Project Schedule as extending beyond the anticipated baseline duration. The extraction capacity will be performing at full capacity within the defined schedule, but we will not be showing the job complete on the schedule until we have completed optimization.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

As mentioned in previous monthly status reports, the construction of the Separation Barrier Wall is complete. The completion documentation and drawings are still being compiled and will be submitted to the U.S.EPA and IDEM when they are completed.

Temporary Engineered Cover of Off-Site Area (5.a.)

The base grades for the temporary engineered cover over the Off-Site Area were completed on June 11, 2001 by MEI. Imported clay has been placed over the areas to be included in the temporary engineered cover. Area Survey Co. completed surveying the Off-Site Area elevations of imported clay on June 15, 2001.

The RFB to complete the remainder of the work for installing the temporary engineered cover was sent to prospective subcontractors on June 29, 2001. The site walk for the work will be conducted on July 3, 2001 and the Temporary Engineered Cover will be completed during the summer of 2001.

PROJECT MANAGEMENT (6)

As required by the Consent Decree, a copy of the schedule and the percent complete for each task is included in this monthly status report. We are including a copy of the updated construction schedule with all progress reflected. The current progress is shown on the

attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

On-site construction meetings were held on June 7, 14, and 21, 2001. Meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The groundwater treatment plant (GWTP) treated water collected from both the Perimeter Groundwater Containment System (PGCS) and BWES during June. Approximately ninety percent of the influent comes from the BWES and ten percent comes from the PGCS at this time. The primary BWES sources of influent are extractions well EW-11, EW-20, EW-20A, EW-20C, and EW-10. Water is pumped from the on-site firepond occasionally to maintain a lowered level. The On-Site Area BWES extraction wells will continue to manage the water levels inside the barrier wall.

The regular effluent compliance sample for the GWTP was collected on June 20, 2001. A special compliance sample was collected on June 26, 2001 from the GTWP effluent currently discharged south of the railroad tracks into the creek downstream of the Off-Site Area retention pond. The analytical data for these samples have not yet been received from the laboratory, but will be included in a future monthly status report. The final validated data for the regular effluent compliance sample will be included in the Groundwater Treatment Plant Quarterly Report, Second Quarter 2001.

Attached are the analytical data results from the May 2001 GWTP effluent compliance sample collected on May 31, 2001. No exceedences were reported. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, Second Quarter 2001.

Groundwater, Air Quality, Wetland, and Monitoring (B.7.)

The March 2001 Groundwater Monitoring Report was submitted to the Agencies on June 26, 2001. The latest round of groundwater monitoring occurred during the week of June 18, 2001. It consisted of collecting water levels and groundwater samples for the entire monitoring network, including the ORC[®] South Area Pilot Study piezometers. The analytical results will be included in a future monthly status report.

Residential Well Water Quality Monitoring (B.8.)

The next round of annual residential well monitoring is tentatively scheduled for September 2001.

The next monthly report will be forwarded to U.S. EPA and IDEM by August 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON HARZA



For Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures: Updated Schedule of Remedial Activities
Figure 1 –Locations of ORC[®] Piezometers
Table 1 –ORC[®] South Area Analytical Results for May 2001
Table 2.2 – Summary of Effluent Analytical Results for May 31, 2001

cc: B. Magel
M. Travers
R. Adams

TMK/RAA/TAL/PJV/jmf
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2090601.0202

Table 1.
ORC South Area Analytical Results
American Chemical Service NPL Site
Griffith, Indiana

Baseline

ORCPZ101	Apr-01	May-01
Benzene	410	200
Chloroethane	56	26 J
Ethylbenzene	460	190
Methylene Chloride	8 J	
Isopropylbenzene	21 J	17 J
Xylene	3100 E	1100

ORCPZ102	Apr-01	May-01
Benzene	650	290
Chloroethane	200	99
Ethylbenzene	16 J	4 J
Methylene Chloride	18 J	
Isopropylbenzene		
Xylene	310	28

ORCPZ103	Apr-01	May-01
Benzene	800	
Chloroethane	73	
Ethylbenzene	14 J	
Methylene Chloride	12 J	
Isopropylbenzene		
Xylene	470	

ORCPZ104	Apr-01	May-01
Benzene	5 J	
Chloroethane	5 J	
Ethylbenzene		
Methylene Chloride	1 J	
Isopropylbenzene		
Xylene	50	1 J

ORCPZ105	Apr-01	May-01
Benzene	590	340
Chlorobenzene	68	61 J
Chloroethane	130	38 J
1,1-Dichloroethane		37 J
1,2-Dichlorobenzene	12 J	37 J
1,4-Dichlorobenzene	49 J	
Ethylbenzene	3100 E	2300
Methylene Chloride	9 J	
Methylcyclohexane	28 J	35 J
4-Methyl-2-Pentanone		19 J
Isopropylbenzene	58	63 J
Toluene	63	180
Xylene	17000 E	8200

Notes:

All concentrations in ug/L

Blank cells indicate parameter was not detected above detection limits

J - Indicates an estimated concentration. Analyte was detected below reporting limits.

E - Analyte concentration exceeded upper calibration limits of instrument.

Due to lab error, sample was not diluted and re-run.

Table 2.2
Summary of Effluent Analytical Results - Second Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 48 5/31/01	Effluent Limits	Lab Reporting Limits
pH	8.16	6-9	none
TSS	2.4	30	10
BOD	ND	30	2
Arsenic	ND	50	3.4
Beryllium	ND	NE	0.2
Cadmium	ND	4.1	0.3
Manganese	52.5	NE	10
Mercury	ND	0.02 (w/DL = 0.64)	0.1
Selenium	ND	8.2	4.3
Thallium	ND	NE	5.7
Zinc	ND	411	1.2
Benzene	ND	5	0.5
Acetone	3	6,800	3
2-Butanone	ND	210	3
Chloromethane	0.2 J	NE	0.5
1,4-Dichlorobenzene	ND	NE	0.5
1,1-Dichloroethane	ND	NE	0.5
cis-1,2-Dichloroethene	ND	70	0.5
Ethylbenzene	ND	34	0.5
Methylene chloride	ND	5	0.6
Tetrachloroethene	ND	5	0.5
Trichloroethene	ND	5	0.5
Vinyl chloride	ND	2	0.5
4-Methyl-2-pentanone	ND	15	3
bis (2-Chloroethyl) ether	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate	ND	6	6
4 - Methylphenol	ND	34	10
Isophorone	ND	50	10
Pentachlorophenol	ND	1	1
PCB/Aroclor-1016	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD5 data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L.

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Approved SW-846 method is incapable of achieving effluent limit.

Suffix Definitions:

/ = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

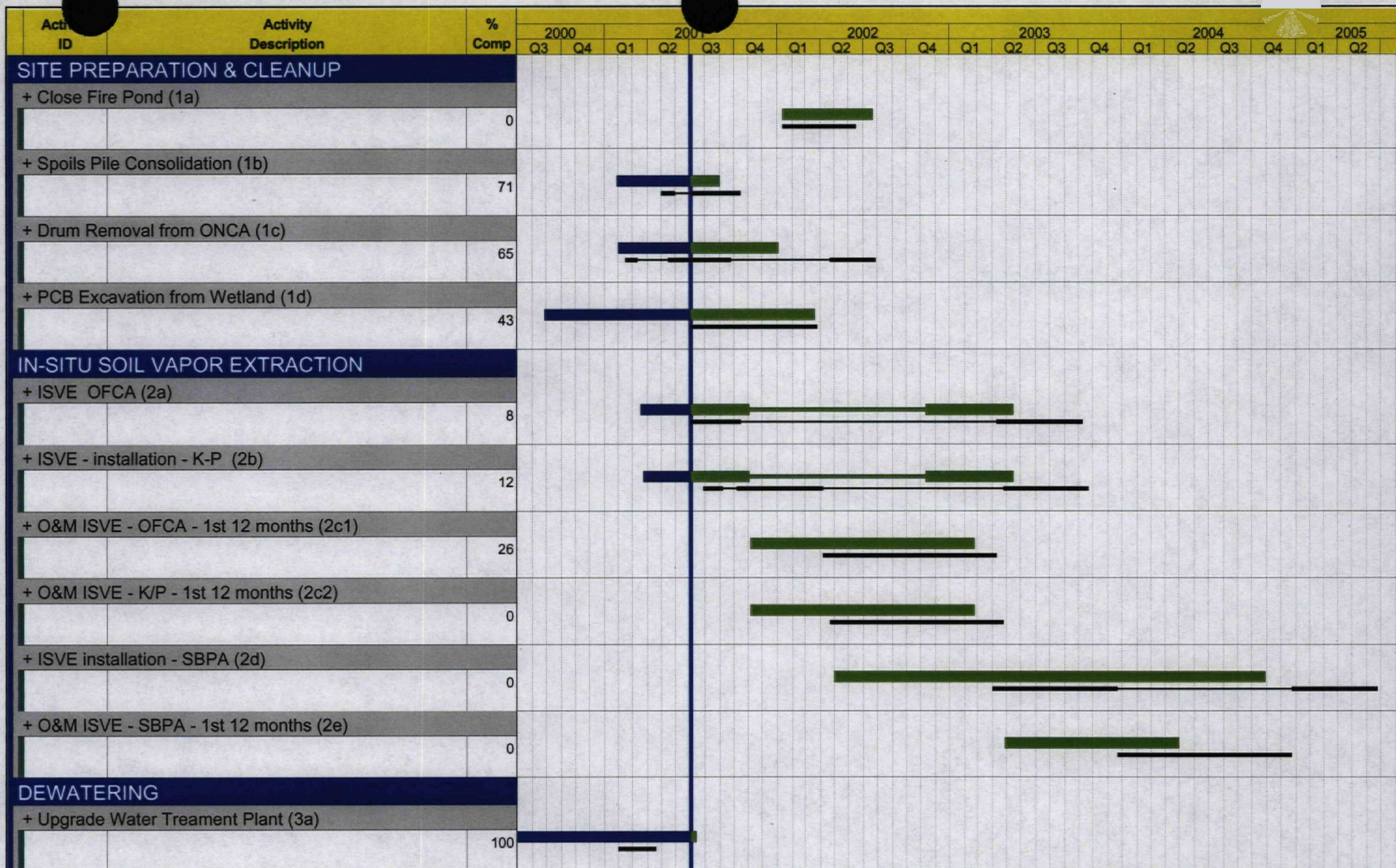
Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias

UB = Analyte is not detected at or above the indicated concentration due to blank contamination

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value



Data Date 02JUL01
Run Date 05JUL01 17:05

Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAD

ACS NPL SITE REMEDIAL ACTION

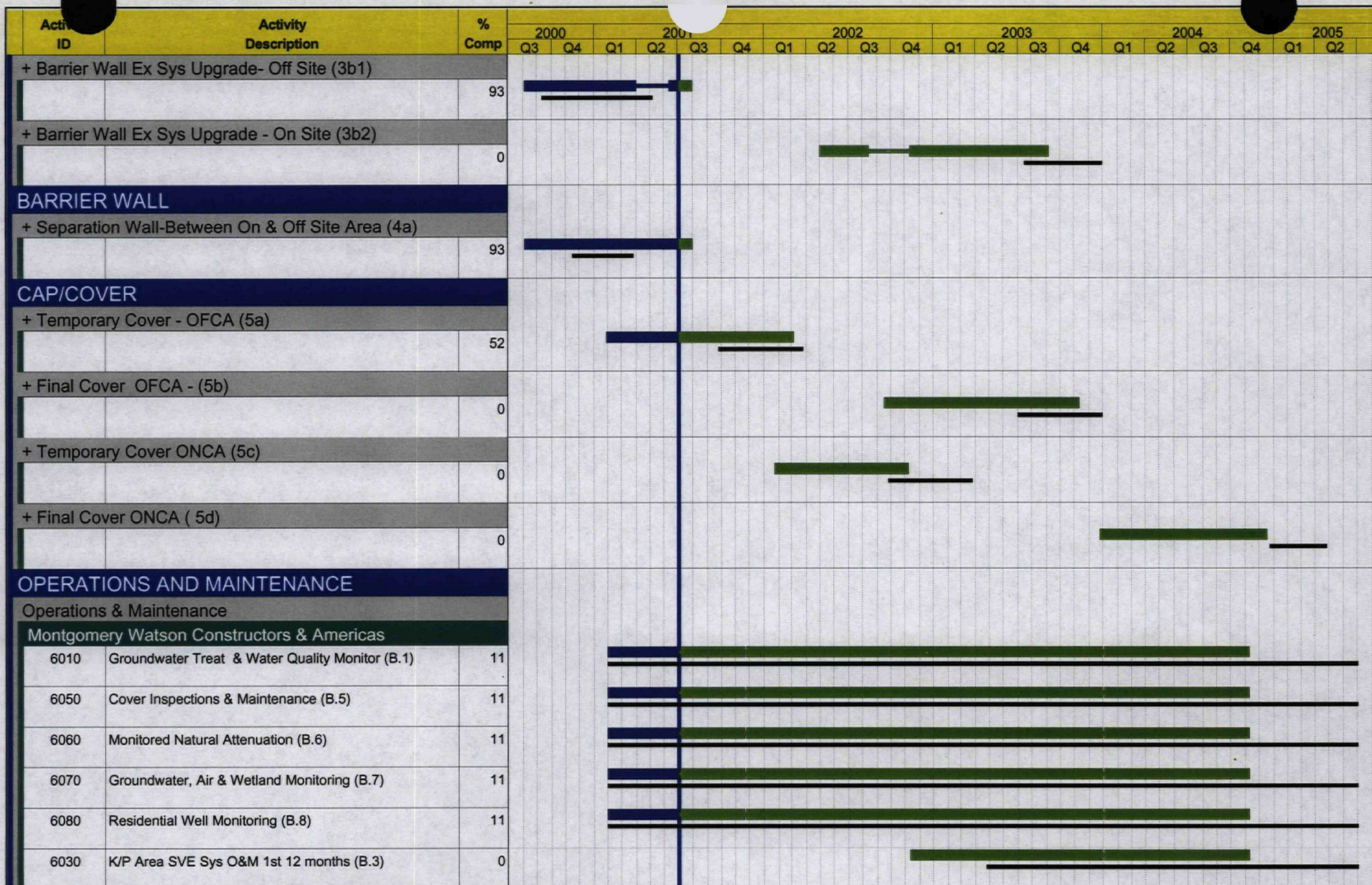
Current Progress (Bar)
vs
CD Schedule (line)

End of June 2001 Report

Sheet 1 of 3



Date	Revision	checked	approved



Data Date 02JUL01
Run Date 05JUL01 17:05

Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAD

ACS NPL SITE REMEDIAL ACTION

Sheet 2 of 3

Current Progress (Bar)
vs
CD Schedule (line)

End of June 2001 Report

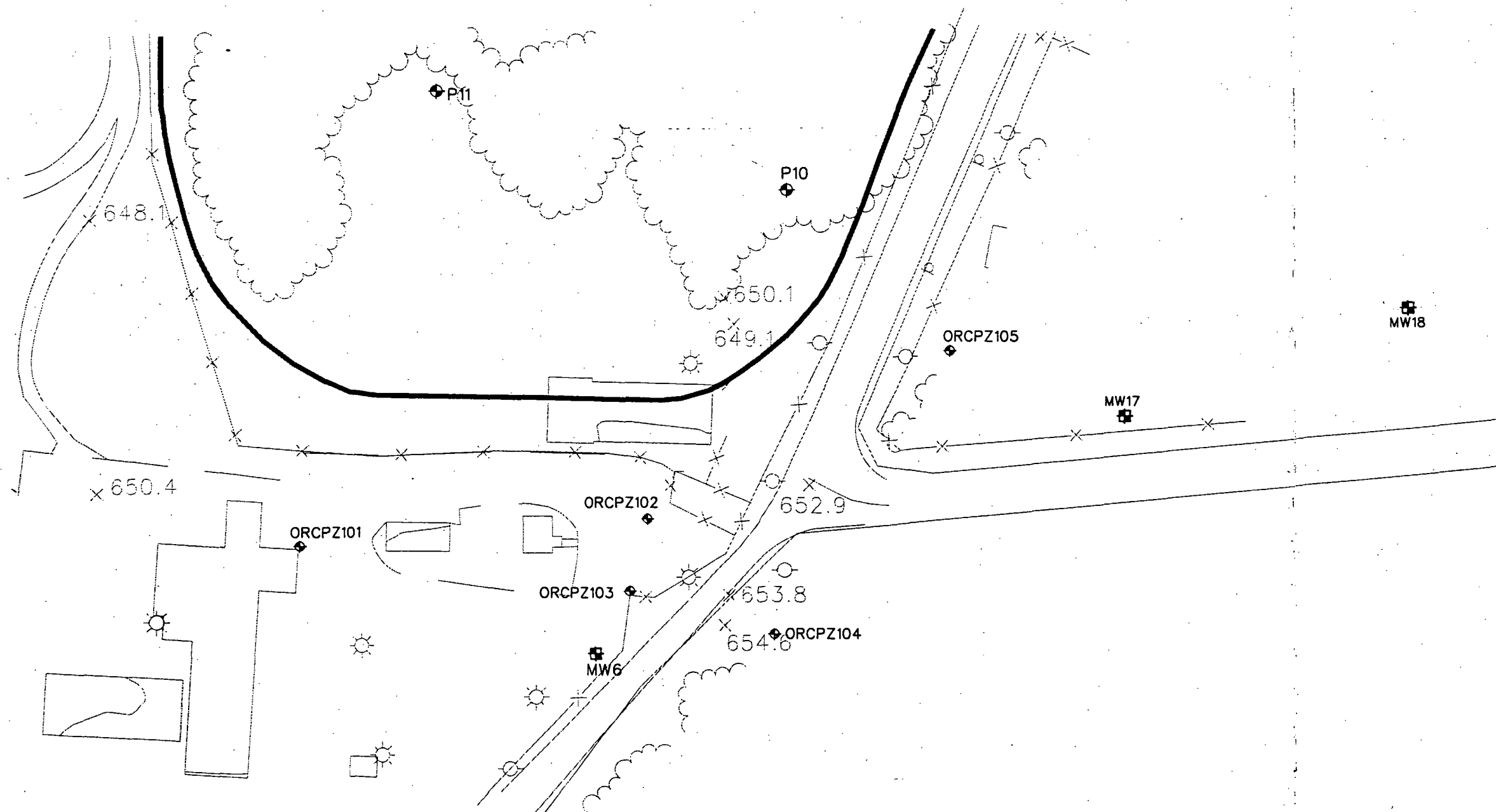


MWH
MONTGOMERY WATSON HARZA

Date	Revision	checked	approved

Activity ID	Activity Description	% Comp																						
			2000				2001				2002				2003				2004				2005	
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
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		28																						

Data Date	02JUL01	<div><div></div>Early Bar</div> <div><div></div>Target 1</div> <div><div></div>Progress Bar</div> <div><div></div>Critical Activity</div>	ACAD	Sheet 3 of 3	<div><div></div><div>MWH</div><div>MONTGOMERY WATSON HARZA</div></div>	Date	Revision	checked	approved
Run Date	05JUL01 17:05		ACS NPL SITE REMEDIAL ACTION						
			Current Progress (Bar) vs CD Schedule (line)						
			End of June 2001 Report						
© Primavera Systems, Inc.									

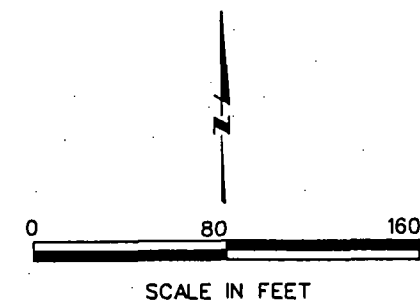


LEGEND

- BARRIER WALL
- UPPER AQUIFER WELL LOCATION AND DESIGNATION
- PIEZOMETER LOCATION AND DESIGNATION
- STAFF GAUGE LOCATION AND DESIGNATION
- SURFACE DISCHARGE LOCATION FOR PERIMETER GROUND WATER CONTAINMENT SYSTEM
- ORC PIEZOMETER LOCATION AND DESIGNATION

NOTES

1. GROUNDWATER ELEVATIONS FOR WATER TABLE CONTOURS WERE MEASURED AT THE SITE ON MARCH 27, 2001.



REV	DATE	BY	DESCRIPTION

DESIGNED	CAS	DATE	5/5/2001
CHECKED	SAF	DATE	
APPROVED	PJV	DATE	

SCALE
AS SHOWN



MONTGOMERY WATSON
Chicago, Illinois

AMERICAN CHEMICAL SERVICES, INC.
NPL SITE
GRIFFITH, INDIANA

LOCATIONS OF ORC
PIEZOMETERS

FIGURE
1

**MWH**

MONTGOMERY WATSON HARZA

July 9, 2001

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, Mail Code SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – June 2001 Activities
ACS NPL Site RD/RA

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In-Situ Vapor Extraction (ISVE) System for Off-Site Containment Area (2.a.)

The Request for Bid (RFB) for the installation of the ISVE wells for the Off-Site Area was sent to prospective bidders the week of June 16, 2001. A pre-bid site walk meeting was held on June 26, 2001 at the Site. MWH has solicited quotes for the Blower Shed and Thermal Oxidizer/Scrubber Unit 1. The thermal oxidizer/scrubber was ordered on May 23,

2001, as reported last month, and the blower shed will be ordered during the first week of July 2001.

Shed construction and oxidizer installation, are scheduled to begin during the summer of 2001. ISVE well installation is also scheduled to occur during the summer of 2001.

Barrier Wall Extraction System (BWES) Upgrades - Off-Site Area (3.b.)

After the completion of the temporary cover in the Off-Site Area, an electrical contractor will install a permanent power system for the Barrier Wall Extraction System (BWES) by running electrical and communication cables from the Groundwater Treatment Plant to the blowershed location. A motor control center will be constructed at the blowershed in July 2001.

Interim pumps have been installed in some of the extraction wells in the Off-Site Area. These will be replaced with permanent pumps after achieving the base grades for the Off-Site cover. Contract Dewatering Services (CDS) will mobilize the week of July 9, 2001 to complete the cleanout portion of extraction well EW-20C.

Due to this construction sequencing, this task is being shown on the Project Schedule as extending beyond the anticipated baseline duration. The extraction capacity will be performing at full capacity within the defined schedule, but we will not be showing the job complete on the schedule until we have completed optimization.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

As mentioned in previous monthly status reports, the construction of the Separation Barrier Wall is complete. The completion documentation and drawings are still being compiled and will be submitted to the U.S.EPA and IDEM when they are completed.

Temporary Engineered Cover of Off-Site Area (5.a.)

The base grades for the temporary engineered cover over the Off-Site Area were completed on June 11, 2001 by MEI. Imported clay has been placed over the areas to be included in the temporary engineered cover. Area Survey Co. completed surveying the Off-Site Area elevations of imported clay on June 15, 2001.

The RFB to complete the remainder of the work for installing the temporary engineered cover was sent to prospective subcontractors on June 29, 2001. The site walk for the work will be conducted on July 3, 2001 and the Temporary Engineered Cover will be completed during the summer of 2001.

PROJECT MANAGEMENT (6)

As required by the Consent Decree, a copy of the schedule and the percent complete for each task is included in this monthly status report. We are including a copy of the updated construction schedule with all progress reflected. The current progress is shown on the

attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

On-site construction meetings were held on June 7, 14, and 21, 2001. Meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The groundwater treatment plant (GWTP) treated water collected from both the Perimeter Groundwater Containment System (PGCS) and BWES during June. Approximately ninety percent of the influent comes from the BWES and ten percent comes from the PGCS at this time. The primary BWES sources of influent are extractions well EW-11, EW-20, EW-20A, EW-20C, and EW-10. Water is pumped from the on-site firepond occasionally to maintain a lowered level. The On-Site Area BWES extraction wells will continue to manage the water levels inside the barrier wall.

The regular effluent compliance sample for the GWTP was collected on June 20, 2001. A special compliance sample was collected on June 26, 2001 from the GTWP effluent currently discharged south of the railroad tracks into the creek downstream of the Off-Site Area retention pond. The analytical data for these samples have not yet been received from the laboratory, but will be included in a future monthly status report. The final validated data for the regular effluent compliance sample will be included in the Groundwater Treatment Plant Quarterly Report, Second Quarter 2001.

Attached are the analytical data results from the May 2001 GWTP effluent compliance sample collected on May 31, 2001. No exceedences were reported. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, Second Quarter 2001.

Groundwater, Air Quality, Wetland, and Monitoring (B.7.)

The March 2001 Groundwater Monitoring Report was submitted to the Agencies on June 26, 2001. The latest round of groundwater monitoring occurred during the week of June 18, 2001. It consisted of collecting water levels and groundwater samples for the entire monitoring network, including the ORC[®] South Area Pilot Study piezometers. The analytical results will be included in a future monthly status report.

Residential Well Water Quality Monitoring (B.8.)

The next round of annual residential well monitoring is tentatively scheduled for September 2001.

The next monthly report will be forwarded to U.S. EPA and IDEM by August 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON HARZA



FOR Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures: Updated Schedule of Remedial Activities
Figure 1 –Locations of ORC[®] Piezometers
Table 1 –ORC[®] South Area Analytical Results for May 2001
Table 2.2 – Summary of Effluent Analytical Results for May 31, 2001

cc: B. Magel
M. Travers
R. Adams

TMK/RAA/TAL/PJV/jmf
J:\209\0601 ACS\0202 MWA PM\msrJuly01.doc
2090601.0202

Table 1.
ORC South Area Analytical Results
American Chemical Service NPL Site
Griffith, Indiana

Baseline		
ORCPZ101	Apr-01	May-01
Benzene	410	200
Chloroethane	56	26 J
Ethylbenzene	460	190
Methylene Chloride	8 J	
Isopropylbenzene	21 J	17 J
Xylene	3100 E	1100

ORCPZ102	Apr-01	May-01
Benzene	650	290
Chloroethane	200	99
Ethylbenzene	16 J	4 J
Methylene Chloride	18 J	
Isopropylbenzene		
Xylene	310	28

ORCPZ103	Apr-01	May-01
Benzene	800	
Chloroethane	73	
Ethylbenzene	14 J	
Methylene Chloride	12 J	
Isopropylbenzene		
Xylene	470	

ORCPZ104	Apr-01	May-01
Benzene	5 J	
Chloroethane	5 J	
Ethylbenzene		
Methylene Chloride	1 J	
Isopropylbenzene		
Xylene	50	1 J

ORCPZ105	Apr-01	May-01
Benzene	590	340
Chlorobenzene	68	61 J
Chloroethane	130	38 J
1,1-Dichloroethane		37 J
1,2-Dichlorobenzene	12 J	37 J
1,4-Dichlorobenzene	49 J	
Ethylbenzene	3100 E	2300
Methylene Chloride	9 J	
Methylcyclohexane	28 J	35 J
4-Methyl-2-Pentanone		19 J
Isopropylbenzene	58	63 J
Toluene	63	180
Xylene	17000 E	8200

Notes:

All concentrations in ug/L.

Blank cells indicate parameter was not detected above detection limits

J - Indicates an estimated concentration. Analyte was detected below reporting limits.

E - Analyte concentration exceeded upper calibration limits of instrument.

Due to lab error, sample was not diluted and re-run.

Table 2.2
Summary of Effluent Analytical Results - Second Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 48 5/31/01	Effluent Limits	Lab Reporting Limits
pH	8.16	6-9	none
TSS	2.4	30	10
BOD	ND	30	2
Arsenic	ND	50	3.4
Beryllium	ND	NE	0.2
Cadmium	ND	4.1	0.3
Manganese	52.5	NE	10
Mercury	ND	0.02 (w/DL = 0.64)	0.1
Selenium	ND	8.2	4.3
Thallium	ND	NE	5.7
Zinc	ND	411	1.2
Benzene	ND	5	0.5
Acetone	3	6,800	3
2-Butanone	ND	210	3
Chloromethane	0.2 J	NE	0.5
1,4-Dichlorobenzene	ND	NE	0.5
1,1-Dichloroethane	ND	NE	0.5
cis-1,2-Dichloroethene	ND	70	0.5
Ethylbenzene	ND	34	0.5
Methylene chloride	ND	5	0.6
Tetrachloroethene	ND	5	0.5
Trichloroethene	ND	5	0.5
Vinyl chloride	ND	2	0.5
4-Methyl-2-pentanone	ND	15	3
bis (2-Chloroethyl) ether	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate	ND	6	6
4 - Methylphenol	ND	34	10
Isophorone	ND	50	10
Pentachlorophenol	ND	1	1
PCB/Aroclor-1016	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD5 data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Approved SW-846 method is incapable of achieving effluent limit.

Suffix Definitions:

/ = Data qualifier added by laboratory

_ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

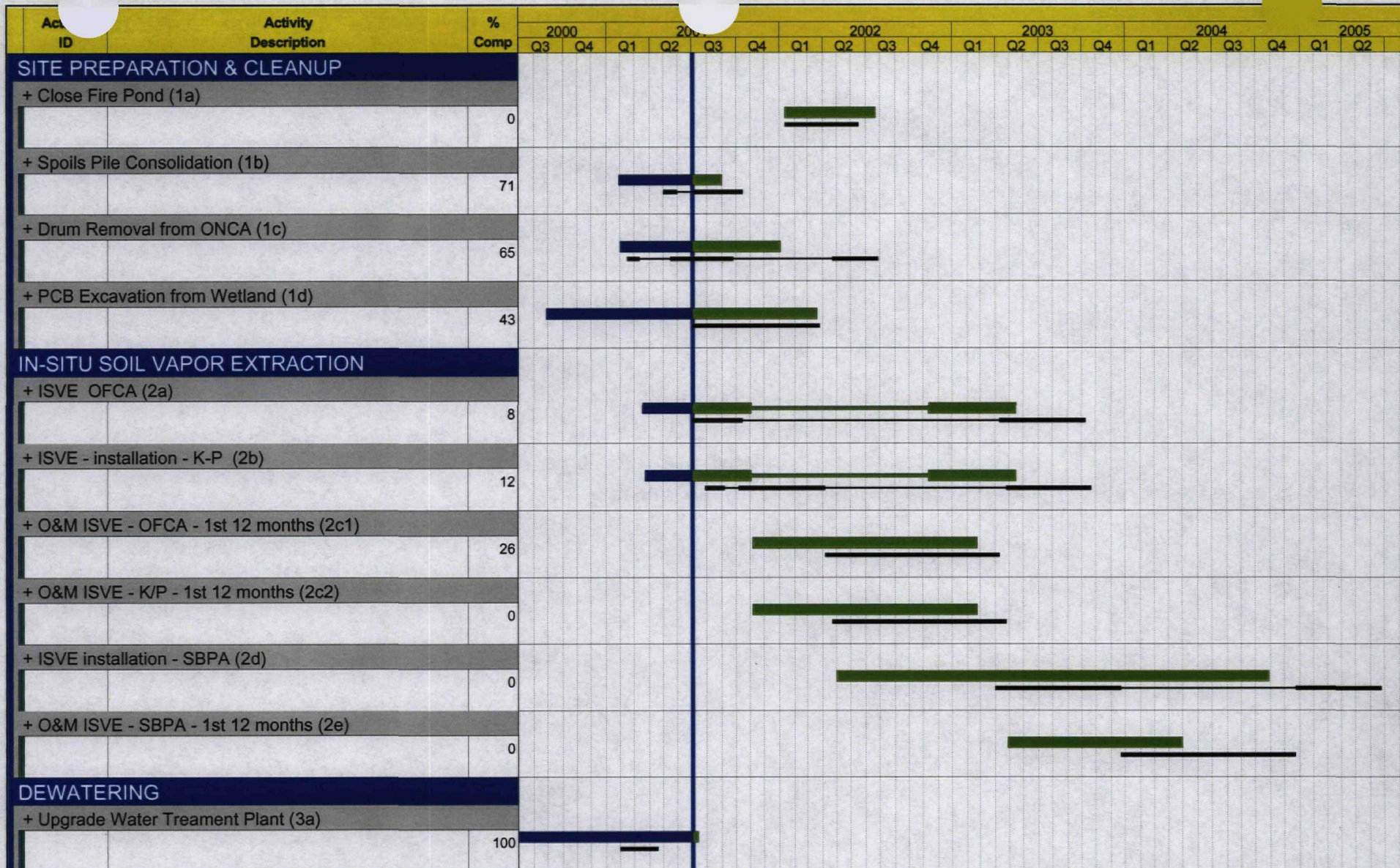
Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias

UB = Analyte is not detected at or above the indicated concentration due to blank contamination

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value



Data Date 02JUL01
Run Date 05JUL01 17:05

Early Bar
Target 1
Progress Bar
Critical Activity

ACAD

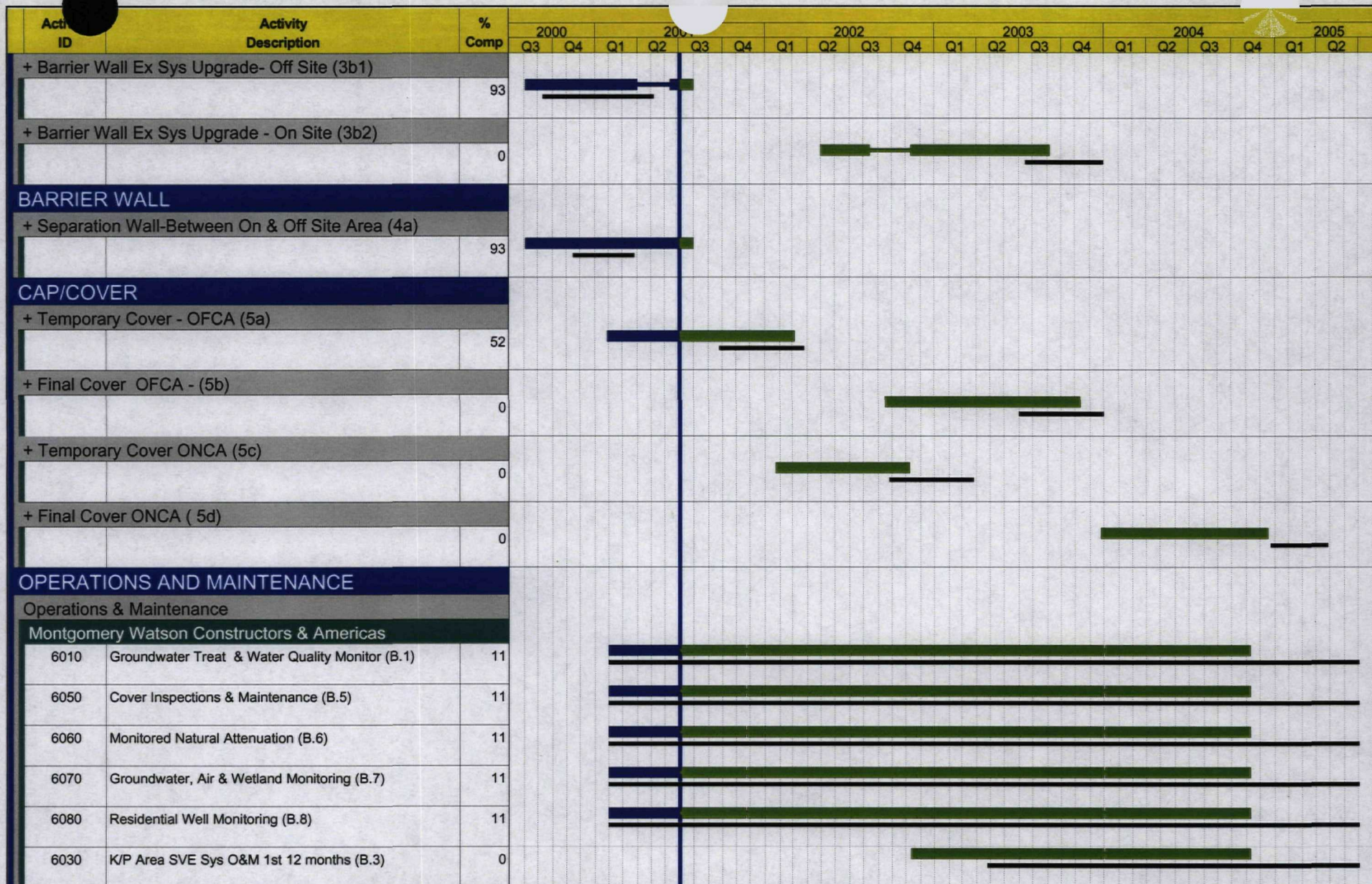
ACS NPL SITE REMEDIAL ACTION

Sheet 1 of 3

Current Progress (Bar)
vs
CD Schedule (line)
End of June 2001 Report



Date	Revision	checked	approved



Data Date 02JUL01
Run Date 05JUL01 17:05

Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAD

ACS NPL SITE REMEDIAL ACTION

Sheet 2 of 3

Current Progress (Bar)
 vs
 CD Schedule (line)
 End of June 2001 Report



MWH
MONTGOMERY WATSON HARZA

Date	Revision	checked	approved

Activity ID	Activity Description	% Comp	2000		2001		2002		2003		2004		2005	
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
6020	OFCA SVE Sys O&M 1st 12 months (B.2)	0												
6040	SBPA SVE Sys O&M after 1st 12 months (B.4)	0												
+ Montgomery Watson Americas														
		22												
MANAGEMENT														
+ MWA Management														
		28												

Data Date 02JUL01
Run Date 05JUL01 17:05

 Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAD Sheet 3 of 3

ACS NPL SITE REMEDIAL ACTION

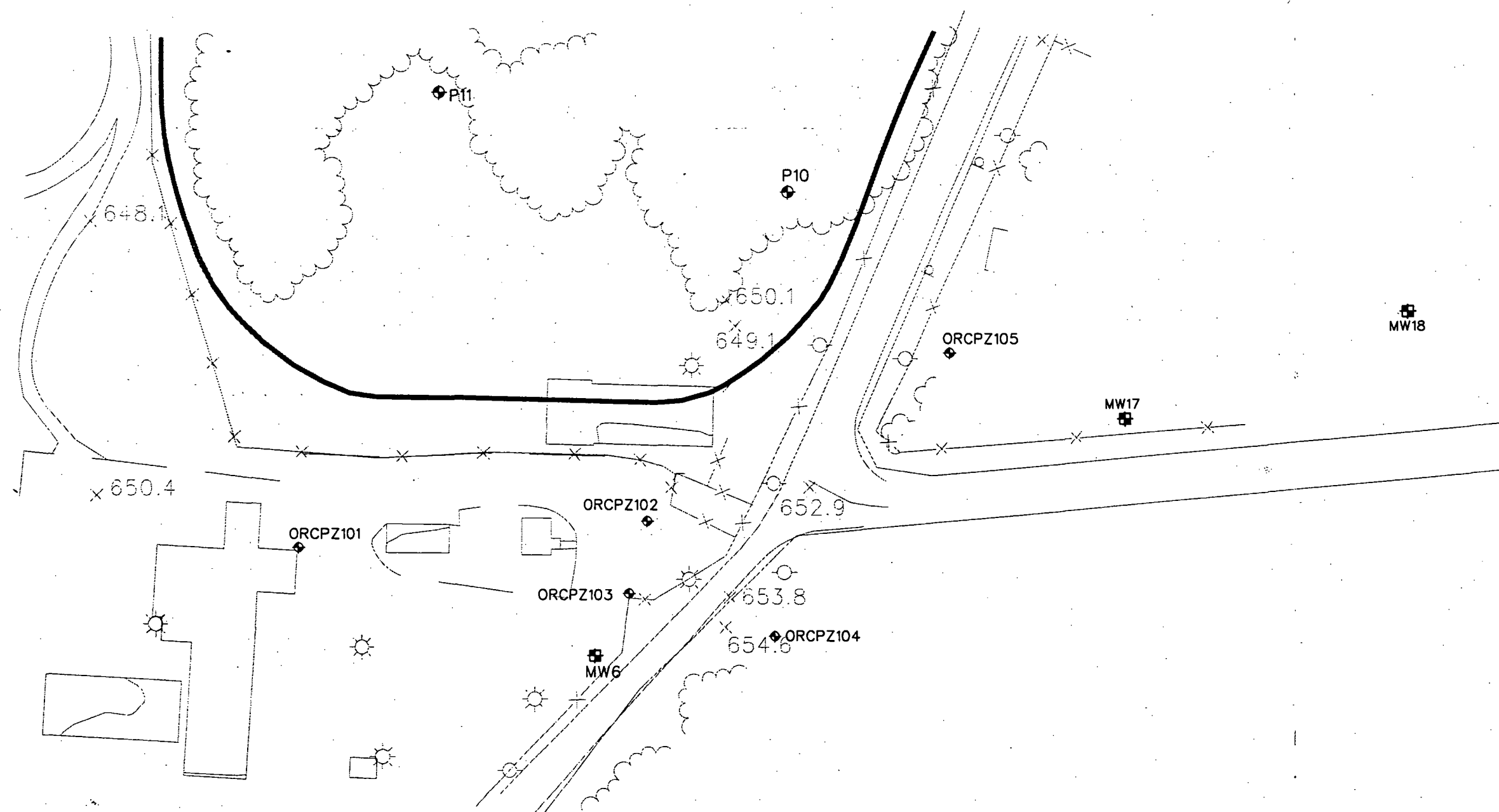
Current Progress (Bar)
vs
CD Schedule (line)

End of June 2001 Report



MWH
MONTGOMERY WATSON HARZA

Date	Revision	checked	approved

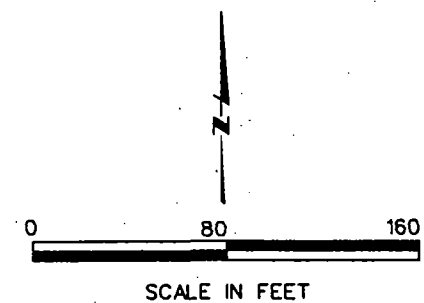


LEGEND

- BARRIER WALL
- UPPER AQUIFER WELL LOCATION AND DESIGNATION
- P61 PIEZOMETER LOCATION AND DESIGNATION
- STAFF GAUGE LOCATION AND DESIGNATION
- SURFACE DISCHARGE LOCATION FOR PERIMETER GROUND WATER CONTAINMENT SYSTEM
- ORCPZ1 ORC PIEZOMETER LOCATION AND DESIGNATION

NOTES

1. GROUNDWATER ELEVATIONS FOR WATER TABLE CONTOURS WERE MEASURED AT THE SITE ON MARCH 27, 2001.



REV	DATE	BY	DESCRIPTION

DESIGNED	CAS	DATE	5/5/2001
CHECKED	SAF	DATE	
APPROVED	PJV	DATE	

SCALE
AS SHOWN



MONTGOMERY WATSON
Chicago, Illinois

AMERICAN CHEMICAL SERVICES, INC.
NPL SITE
GRIFFITH, INDIANA

LOCATIONS OF ORC
PIEZOMETERS

FIGURE

1

**MWH**

MONTGOMERY WATSON HARZA

August 9, 2001

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
Region V
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – July 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the American Chemical Services, Inc. (ACS) National Priority List (NPL) Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001, and covers the activities undertaken at the Site during the month of July 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Spoils Pile Consolidation (1.b.)

This task is complete, as reported in last month's status report. The completion documentation and drawings will be compiled in conjunction with the documentation for the Off-Site Area interim cover and submitted to the United States Environmental Protection Agency (U.S. EPA) and the Indiana Department of Environmental Management (IDEM). This item will be dropped from future progress reports.

Drum Removal in On-Site Containment Area (1.c.)

The over-packed drums and roll-off boxes are currently being stored on site as disposal options are evaluated. The over-packed drums are being stored on the drum containment pad. Preliminary information indicates that the drum carcasses, which were placed in roll-off boxes, will be processed or sorted on Site and placed back into the roll-off containers for disposal. The drums, roll-off boxes, and staging pad are inspected daily for any signs of leakage or degradation.

Montgomery Watson Harza (MWH) conducts weekday inspections and trained ACS facility personnel conduct weekend inspections.

A range of waste disposal facilities have been contacted to determine their requirements for accepting the overpacked drums and roll-off boxes containing material excavated during the drum removal activities. These facilities have received the hazcat field sampling results. Notification of disposal plans and any additional characterization required by the disposal facility will be forwarded to the U.S. EPA and IDEM as soon as they are determined. MWH will work with U.S. EPA and IDEM to complete proper disposal of these materials.

PCB Sediment Excavation from Wetland (1.d.)

Midwest Environmental Inc. (MEI) mobilized on July 24, 2001 to perform the fieldwork for the PCB Sediment Excavation program approved by the U.S. EPA and IDEM. On July 25 and July 26, the area was prepared for excavation. Cattails were knocked down in the wetlands area to be excavated. Also, the area west of the ACS firepond was graded to act as a sediment staging area. It was sloped toward the firepond so that water from the stockpiled sediment would drain back into the firepond. The area will be used to stockpile excavated soil removed from the wetlands until it is allowed to drain of remaining water. Sampling of the stockpiles will be done to delineate sediments that contain concentrations of PCBs greater than 50 parts per million (ppm).

A temporary road was constructed from the groundwater treatment plant (GWTP) into the wetlands on July 27, 2001. Six foot by 12-foot portable road panels of high-density polyethylene (HDPE) were placed on top of the wetland surface and connected with interlocking fasteners. The roadway panels were put in place utilizing an off-road loader equipped with lifting forks. When the excavation is completed, the panel will be decontaminated and removed from the site. The road will assist in equipment and truck mobility through the wetland. A trench was constructed to an approximate depth of five feet along the north side of the temporary road and a sump system was placed in the trench to facilitate further dewatering of the wetlands in the vicinity of the excavation. The water collected in this trench is being pumped to the GWTP for treatment. During July, discharge from the GWTP was redirected to south of the railroad tracks instead of the wetlands. This further helped to lower water levels in the wetlands to aid in the sediment excavation process. Since July 31, 2001 a portion of the discharge from the GWTP has been directed to a 20,000-gallon fract tank in the Off-Site Area to be used in the construction of the interim cover.

Also, a stormwater diversion system was constructed on July 30, 2001 to capture stormwater runoff from the ACS facility, which normally drains into the wetlands, and discharge it south of the railroad tracks. This step was also taken to lower water levels for the wetland excavation.

Groundwater Plume Treatment (1.e.)

The third round of groundwater sampling of the five piezometers of the South Area ORC[®] Pilot Study was conducted on June 29, 2001. This was the second round of sampling conducted after the ORC[®] application. A table summarizing the analytical data from the June 2001 round is attached. The final validated data will be included in the South Area ORC[®] Pilot Study report at the end of the pilot study.

The July 2001 round of ORC[®] South Area Pilot Study sampling was conducted on July 26, 2001. The analytical results will be included in a future monthly status report. The next round of ORC[®] sampling is scheduled for September 2001. There is no sampling scheduled for August 2001.

In-Situ Vapor Extraction (ISVE) System for Off-Site Containment Area (2.a.)

MWH ordered Blower Shed #1 for the Off-Site Containment Area ISVE system on July 2, 2001. Shed construction and oxidizer installation, are scheduled to continue during the summer of 2001. A motor control center for the ISVE system was ordered on July 17, 2001. It will be installed in the switchroom of Blower Shed #1. Boart Longyear has been selected as the subcontractor to install the wells for the ISVE system. They will mobilize during August 2001.

Barrier Wall Extraction System (BWES) Upgrades - Off-Site Area (3.b.)

Interim pumps have been installed in some of the extraction wells in the Off-Site Area. These will be replaced with permanent pumps after base grades are completed for the Off-Site cover.

After the completion of the temporary cover in the Off-Site Area, an electrical contractor will install a permanent power system for the Barrier Wall Extraction System (BWES). Communication cables will be installed from the Groundwater Treatment Plant to the blower shed location. A new power service from NIPSCO is in development.

Contract Dewatering Services (CDS) mobilized on July 17, 2001 to extend the cleanout for extraction well EW-20 to above ground surface. The quality assurance testing performed by MWH on EW-20 has failed to confirm that it was constructed as specified. We are discussing with CDS steps to verify correct construction.

Due to this construction sequencing, this task is being shown on the Project Schedule as extending beyond the anticipated baseline duration. The extraction capacity is performing to expectations within the defined schedule, but we will not be showing the job complete on the schedule until we have installed the permanent system equipment and finished optimization.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

The Separation Barrier Wall construction was completed in March 2001. The completion documentation and drawings are still being compiled and will be submitted to the U.S. EPA and IDEM as soon as they are available.

Temporary Engineered Cover of Off-Site Area (5.a.)

A sitewalk meeting was held on July 3, 2001 for the installation of the temporary engineered cover of the Off-Site Area. On July 19, 2001 a telephone conference call was held between MWH and Koester Environmental Services (KES), the subcontractor selected to perform the work. KES mobilized on July 23, and a site kick-off and health and safety meeting was held on July 24. KES began placing clay on July 31, 2001 in the Off-Site Area. The interim cover is scheduled to be completed during August 2001.

Attached is a map summarizing the groundwater monitoring piezometers that have been destroyed or damaged during the installation of the interim cap. This map will be used to develop a piezometer replacement plan.

PROJECT MANAGEMENT (6)

A copy of the updated construction schedule is attached. The current progress is shown on the attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

On-site construction meetings were held on July 12 and 19, 2001. Standing weekly meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The groundwater treatment plant (GWTP) treated water collected from both the Perimeter Groundwater Containment System (PGCS) and BWES during July. Approximately fifty percent of the influent came from the BWES and firepond in order to dewater inside the barrier wall. The primary BWES sources of influent are extractions well EW-11, EW-20, EW-20A, EW-20B, EW-20C, and EW-10. The remaining flow came from the PGCS in order to dewater the wetlands for the PCB-impacted soil excavation.

The regular effluent compliance sample for the GWTP was collected on July 25, 2001. The analytical data for this sample has not yet been received from the laboratory, but will be included in a future monthly status report. The final validated data for the regular effluent compliance sample will be included in the Groundwater Treatment Plant Quarterly Report, Third Quarter 2001.

The analytical data results for the June 20 and June 26, 2001 GWTP effluent compliance samples are attached. The June 20 sample was collected from the regular effluent port in the GWTP. At the request of the U.S. EPA, a special compliance sample was collected on June 26, 2001 from the GTWP effluent, which was discharged south of the railroad tracks into the creek downstream of the Off-Site Area retention pond. No exceedences were reported in either sample. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, Second Quarter 2001.

Groundwater, Air Quality, Wetland, and Monitoring (B.7.)

The latest round of groundwater monitoring was conducted during the week of June 18, 2001. It consisted of collecting water levels and groundwater samples for the entire monitoring network, including the ORC[®] South Area Pilot Study piezometers. The analytical results are attached. The June 2001 Groundwater Monitoring Report is scheduled to be sent to the Agencies during August 2001.

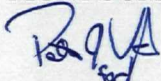
Residential Well Water Quality Monitoring (B.8.)

The next round of annual residential well monitoring is tentatively scheduled for September 2001, during the third quarter groundwater monitoring event.

The next monthly report will be forwarded to U.S. EPA and IDEM by September 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON HARZA



Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures:

Updated Schedule of Remedial Activities
Figure 1 –Piezometers in the Off-Site Area
Table 1 –ORC® South Area Analytical Results for June 2001
Table 2.2 – Summary of Effluent Analytical Results for June 20 and June 26, 2001
Table 7 - Summary of Organic Compound Detections in the Upper Aquifer: June 2001
Table 8 - Summary of Organic Compound Detections in the Lower Aquifer: June 2001
Table 9 – Summary of Inorganic Baseline Exceedances for June 2001

cc: File
Barbara Magel
Mark Travers
Larry Campbell
Rob Adams
Pete Vagt
Travis Klingforth

TMK/RAA/PJV/TAL/jmf
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2090601.020201

**MWH**

MONTGOMERY WATSON HARZA

September 7, 2001

Kevin Adler, Mail Code SR-J6
Remedial Project Manager
Region V
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – August 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the American Chemical Services, Inc. (ACS) National Priority List (NPL) Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001, and covers the activities undertaken at the Site during the month of August 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Drum Removal in On-Site Containment Area (1.c.)

The overpacked drums and roll-off boxes excavated during May 2001 continue to be stored on site as disposal options are evaluated. The overpacked drums are being stored on the drum containment pad and drum carcasses are being stored in roll-off boxes. The drums, roll-off boxes, and staging pad are inspected daily for any signs of leakage or degradation.

Different waste disposal facilities have been contacted to determine their requirements for accepting the overpacked drums and roll-off box contents. The disposal options have been narrowed to four incineration facilities. Notification of disposal plans and any additional characterization required by the disposal facility will be forwarded to the U.S. EPA and

IDEM as soon as they are determined. MWH will work together with U.S. EPA and IDEM for management and disposal. MWH has requested a time extension from the state of Indiana.

PCB Sediment Excavation from Wetland (1.d.)

Midwest Environmental Inc. (MEI) began excavation of the previously-delineated PCB-impacted area of the wetlands on August 8, 2001. They began with the stockpiled spoils generated from construction of the Perimeter Groundwater Collection System (PGCS). Excavated soil was transported to a prepared area just west of the ACS firepond for temporary stockpiling in a bermed area. The few remaining trees which were in the excavation area were felled. Decontamination stations were set up at the east end of the temporary road and at the spoils pile area near the firepond. Confirmation samples were collected beginning on August 9, 2001 as work progressed. Excavation continued toward the east along the temporary road, and road panels were removed and decontaminated as the excavation progressed.

The wetland excavation, as originally delineated, was completed on August 23, 2001. Confirmation samples were split between two laboratories, Simalabs and Compuchem. Simalabs offered next day turnaround of sample results and was used as screening data. Based upon confirmation data results from Compuchem laboratories, additional material will need to be removed in eight locations of the excavation. Confirmation samples will then be repeated in those locations.

The restoration of the wetlands began on September 4, 2001 in areas that have been confirmed as meeting the remedial objective. The eastern portion of the excavated area will be restored by backfilling and allowing volunteer plants to populate. It is anticipated that the western portion will be restored by further excavation to construct a pond upon agreement between the U.S. EPA and ACS RD/RA Technical Committee.

Groundwater Plume Treatment (1.e.)

The fourth round of groundwater sampling of the five piezometers of the South Area ORC[®] Pilot Study was conducted on July 26, 2001. This was the third round of sampling conducted after the ORC[®] application. A table summarizing the analytical data from the July 2001 round is attached. Figure 1 is attached to show sampling locations. The final validated data will be included in the South Area ORC[®] Pilot Study report at the end of the pilot study.

In accordance with the approved ORC[®] plan, no sampling of the ORC[®] South Area Pilot Area was conducted in August 2001. The next round of ORC[®] sampling is scheduled for September 2001.

In-Situ Vapor Extraction (ISVE) System for Off-Site Containment Area (2.a.)

Boart Longyear & Associates (BLA), the contractor selected to install the ISVE wells, mobilized its equipment and crew on August 27, 2001. The construction kickoff and health and safety kickoff meetings were held on August 28, 2001. Six ISVE wells were

installed in the Kapica-Pazmey (K-P) area on August 29, 2001, the first day of well installation. BLA completed the twelve wells in the K-P Area on August 30, 2001 and is on schedule to complete well installation in the Off-Site Containment Area (OFCA) by September 14, 2001. The target location of each well was delineated at the site by Area Survey prior to installation.

Piping which will penetrate the blower shed pad of the ISVE system was placed during the week of August 27, 2001. The blower shed clay sub-base has met specified grade and passed compaction and moisture testing. Ryan Construction is scheduled to place the concrete forms and pour the concrete for the blower shed pad during the week of September 4, 2001. Blower shed delivery will be scheduled to coincide with the curing times for the concrete and concrete coating.

Barrier Wall Extraction System (BWES) Upgrades - Off-Site Area (3.b.)

Interim pumps have been installed in several of the extraction wells in the Off-Site Area. These will be replaced with permanent pumps after base grades are completed for the Off-Site cover.

Austgen Electric laid an interim underground power supply from extraction well EW-20C to the nearby temporary power pole service. Permanent power cable for EW-20C was installed from Blower Shed to vicinity of EW-20C during the week of August 27, 2001. A permanent power cable was also run from Colfax Avenue to the Blower Shed and will be connected prior to the startup of the blower unit. Austgen Electric is assembling control boxes to be installed at each Off-Site Area Extraction Well.



Extraction well EW-20 is still not functioning per its design. MWH and Contract Dewatering Services (CDS), the contractor who installed the well, continue to assess the problem. Due to this construction sequencing, this task is being shown on the Project Schedule as extending beyond the anticipated baseline duration. The extraction capacity is performing to expectations within the defined schedule, but we will not be showing the job complete on the schedule until we have installed the permanent system equipment and finished optimization. The final pumps and controls are scheduled to start operation in September 2001.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

The Separation Barrier Wall construction was completed in March 2001. The completion documentation and drawings are being compiled and will be submitted to the U.S. EPA and IDEM.

Temporary Engineered Cover of Off-Site Area (5.a.)

Koester Environmental Services (KES) continued to install the temporary engineered cover during August. Great Lakes Soil & Environmental conducted moisture and compaction testing on areas which KES had conditioned. The installation of clay for the temporary cover was completed and passed final compaction and moisture testing on August 28, 2001. It has been surveyed at final grade. Rip rap has been installed in all required swale locations. During the week of September 4, 2001 topsoil installation should be completed.

in required areas and erosion matting and grass seed should be installed. A final punchlist will be generated by MWH and KES the week of September 4, 2001.

PROJECT MANAGEMENT (6)

A copy of the updated construction schedule is attached. The current progress is shown on the attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

On-site construction meetings were held on August 9, 16, 23, and 30, 2001. Standing weekly meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Barrier Wall Extraction System (BWES) was shut off for most of August 2001 due to the Off-Site Area cover work. In addition, water was no longer being pumped to the Groundwater Treatment Plant (GWTP) from the firepond because the firepond has been filled to near capacity with soil excavated from the wetlands. The treatment plant influent was taken from the wetland area and the Perimeter Groundwater Collection System (PGCS) in order to facilitate the excavation work. During most of August 2001, treated effluent from the GWTP was directed to a 20,000-gallon fract tank which KES used to achieve the required moisture in the clay they were installing in the Off-Site Area.

During portions of August 2001, up to 99% of the GWTP influent was from dewatering the wetland area. A rainstorm over the weekend of August 25 and 26, 2001 raised the water level in the wetland area so additional dewatering was required.

As mentioned earlier, extraction well EW-20 is still not functioning per its design. MWH and Contract Dewatering Services (CDS), the contractor who installed the well, continue to assess the problem. In the meantime, other pumps have been brought on-line to achieve planned dewatering rates. Permanent electric lines will be run to extraction wells EW-16, EW-15, EW-19, and EW-19A. The surge capacity of the GWTP will be increased for the upcoming mechanical work to be performed in conjunction with the installation of the Blower Shed in the Off-Site Area.

Regular effluent compliance samples for the GWTP were collected on July 25, 2001 and August 9, 2001. A summary of the analytical data for these samples is attached. The final validated data for these effluent compliance samples will be included in the Groundwater Treatment Plant Quarterly Report, Third Quarter 2001. No exceedences were reported in either sample.

Groundwater, Air Quality, Wetland, and Monitoring (B.7.)

The next round of Groundwater Monitoring will be determined according to the proposed revised Long-Term Groundwater Monitoring Sampling Plan.

Residential Well Water Quality Monitoring (B.8.)

The next round of annual residential well monitoring is scheduled for September 2001.

The next monthly report will be forwarded to U.S. EPA and IDEM by October 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON HARZA



For Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures:

Updated Schedule of Remedial Activities

Table 1 –ORC[®] South Area Analytical Results for June 2001

Table 2.2 – Summary of Effluent Analytical Results for July 25 and August 9, 2001

Figure 1 – Map of ORC[®] South Area Sampling Points

cc: FILE

Barbara Magel

Mark Travers

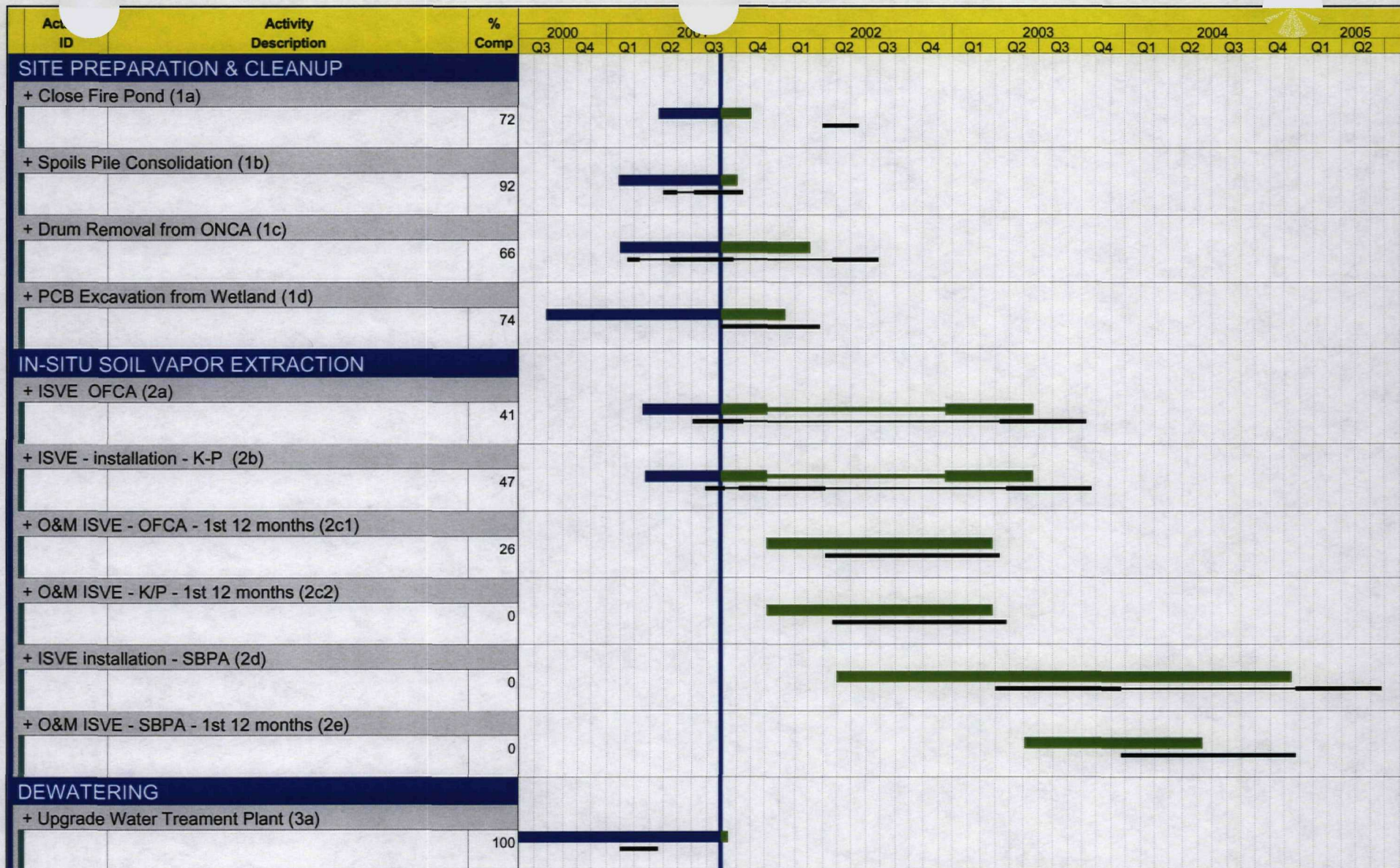
Larry Campbell

Rob Adams

Pete Vagt

Travis Klingforth

TMK/TAL/RAA/PJV
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2090601.0202



Data Date 31AUG01
Run Date 04SEP01 10:36

 Early Bar
 Target 1
 Progress Bar
 Critical Activity

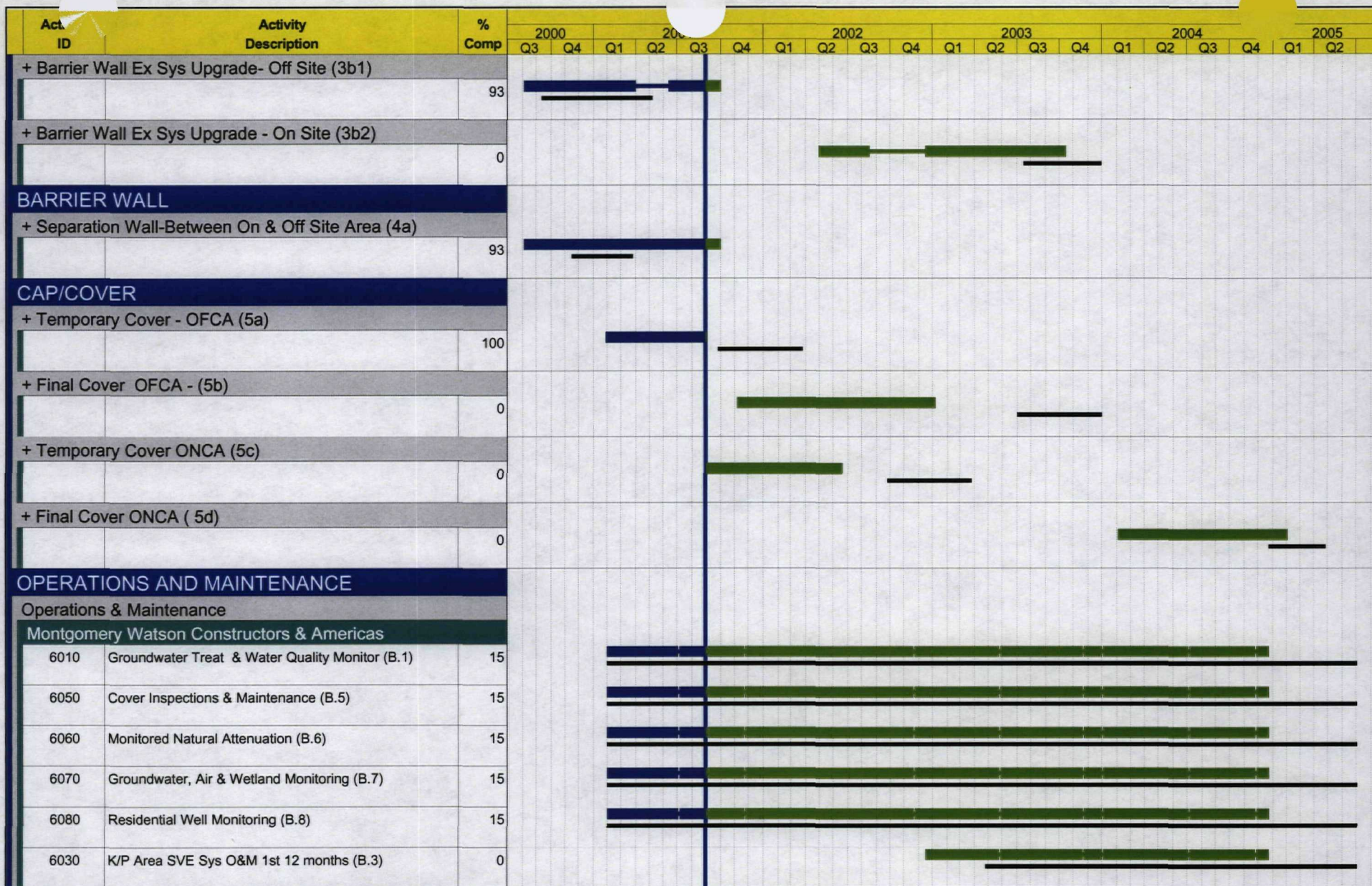
ACSL

ACS NPL SITE REMEDIAL ACTION

Sheet 1 of 3

Current Progress (Bar)
 vs
 CD Schedule (line)
 End of August 2001 Report





Data Date 31AUG01
Run Date 04SEP01 10:36

Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACSL

ACS NPL SITE REMEDIAL ACTION

Sheet 2 of 3

Current Progress (Bar)
vs
CD Schedule (line)

End of August 2001 Report

Activity ID	Activity Description	% Comp	2000		2001		2002		2003		2004		2005	
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
6020	OFCA SVE Sys O&M 1st 12 months (B.2)	0												
6040	SBPA SVE Sys O&M after 1st 12 months (B.4)	0												
+ Montgomery Watson Americas														
		17												
+ MANAGEMENT														
		24												

Data Date 31AUG01
Run Date 04SEP01 10:36

 Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACSL

ACS NPL SITE REMEDIAL ACTION

Sheet 3 of 3

Current Progress (Bar)
 vs
 CD Schedule (line)
 End of August 2001 Report



MWH
MONTGOMERY WATSON HARZA

Table 2.2
Summary of Effluent Analytical Results - Third Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

	Event Date	Month 50 7/25/01	Month 51 8/9/01	Effluent Limits	Lab Reporting
pH		7.8	7.7	6-9	none
TSS		ND	ND	30	10
BOD		ND	ND	30	2
Arsenic		7.6 B/	6.2 B/	50	3.4
Beryllium		0.12 B/	ND	NE	0.2
Cadmium		0.86 B/	1.1 B/	4.1	0.3
Manganese		36.2	5.4 B/	NE	10
Mercury		ND	ND	0.02 (w/DL = 0.64)	0.1
Selenium		ND	ND	8.2	4.3
Thallium		5.5 B/	8 B/	NE	5.7
Zinc		ND	35.7	411	1.2
Benzene		0.02 J/	0.04 J/	5	0.5
Acetone		2 JB/	ND	6,800	3
2-Butanone		ND	ND	210	3
Chloromethane		ND	ND	NE	0.5
1,4-Dichlorobenzene		ND	0.1 J/	NE	0.5
1,1-Dichloroethane		ND	ND	NE	0.5
cis-1,2-Dichloroethene		ND	ND	70	0.5
Ethylbenzene		ND	0.05 J/	34	0.5
Methylene chloride		0.2 JB/	0.2 JB/	5	0.6
Tetrachloroethene		ND	ND	5	0.5
Trichloroethene		ND	0.04 J/	5	0.5
Vinyl chloride		ND	ND	2	0.5
4-Methyl-2-pentanone		ND	ND	15	3
bis (2-Chloroethyl) ether		ND	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate		ND	ND	6	6
4-Methylphenol		ND	ND	34	10
Isophorone		ND	ND	50	10
Pentachlorophenol		ND	ND	1	1
PCB/Aroclor-1016		ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221		ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232		ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242		ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248		ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254		ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260		ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD5 data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Approved SW-846 method is incapable of achieving effluent limit.

= Sample was collected from discharge point south of railroad tracks

Suffix Definitions:

_/ = Data qualifier added by laboratory

_ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias

UB = Analyte is not detected at or above the indicated concentration due to blank contamination

UI = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

Table 1. ORC South Area Analytical Results
ACS NPL Site

baseline

ORCPZ101	Apr-01	May-01	Jun-01	Jul-01
Benzene	410	200	180	530
Chloroethane	56	26 J	27	120
Chlorobenzene			3 J	
Ethylbenzene	460	190	150	220
Methylene Chloride	8 J			
Isopropylbenzene	21 J	17 J	20	32 J
trans-1,2-Dichloroethene			0.9 J	
1,2-Dichlorobenzene			2 J	
Xylene	3100 E	1100	1400 D	3400

ORCPZ102	Apr-01	May-01	Jun-01	Jul-01
Benzene	650	290	93	6000
Chloroethane	200	99	65	580
Ethylbenzene	16 J	4 J		53 J
Methylene Chloride	18 J			
Isopropylbenzene				
trans-1,2-Dichloroethene			2 J	
Xylene	310	28		810

ORCPZ103	Apr-01	May-01	Jun-01	Jul-01
Benzene	800			
Chloroethane	73			
Ethylbenzene	14 J			
Methylene Chloride	12 J			
Isopropylbenzene				
Xylene	470			

ORCPZ104	Apr-01	May-01	Jun-01	Jul-01
Benzene	5 J		75	41
Chloroethane	5 J		8 J	5 J
Chlorobenzene			4 J	4 J
Ethylbenzene				1 J
Methylene Chloride	1 J			
Isopropylbenzene				
Xylene	50	1 J	51	14

ORCPZ105	Apr-01	May-01	Jun-01	Jul-01
Benzene	590	340	380	290 J
Chlorobenzene	68	61 J	59	
Chloroethane	130	38 J	88	
Cyclohexane			14 J	
1,1-Dichloroethane		37 J	44 J	
1,2-Dichlorobenzene	12 J	37 J	49 J	
1,4-Dichlorobenzene	49 J		12 J	
Ethylbenzene	3100 E	2300	2600 D	2700
Methylene Chloride	9 J			
Methylcyclohexane	28 J	35 J	57	32 J
4-Methyl-2-Pentanone		19 J		
Isopropylbenzene	58	63 J	87	65 J
Toluene	63	180	240	310 J
1,1,1-Trichloroethane			7 J	
Xylene	17000 E	8200	13000 D	14000

Table 2.2
Summary of Effluent Analytical Results - Third Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

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2-Butanone	ND	ND	210	3
Chloromethane	ND	ND	NE	0.5
1,4-Dichlorobenzene	ND	0.1 J/	NE	0.5
1,1-Dichloroethane	ND	ND	NE	0.5
cis-1,2-Dichloroethene	ND	ND	70	0.5
Ethylbenzene	ND	0.05 J/	34	0.5
Methylene chloride	0.2 JB/	0.2 JB/	5	0.6
Tetrachloroethene	ND	ND	5	0.5
Trichloroethene	ND	0.04 J/	5	0.5
Vinyl chloride	ND	ND	2	0.5
4-Methyl-2-pentanone	ND	ND	15	3
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bis(2-Ethylhexyl) - phthalate	ND	ND	6	6
4 - Methylphenol	ND	ND	34	10
Isophorone	ND	ND	50	10
Pentachlorophenol	ND	ND	1	1
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PCB/Aroclor-1254	ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

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TSS and BOD5 data is expressed in mg/L

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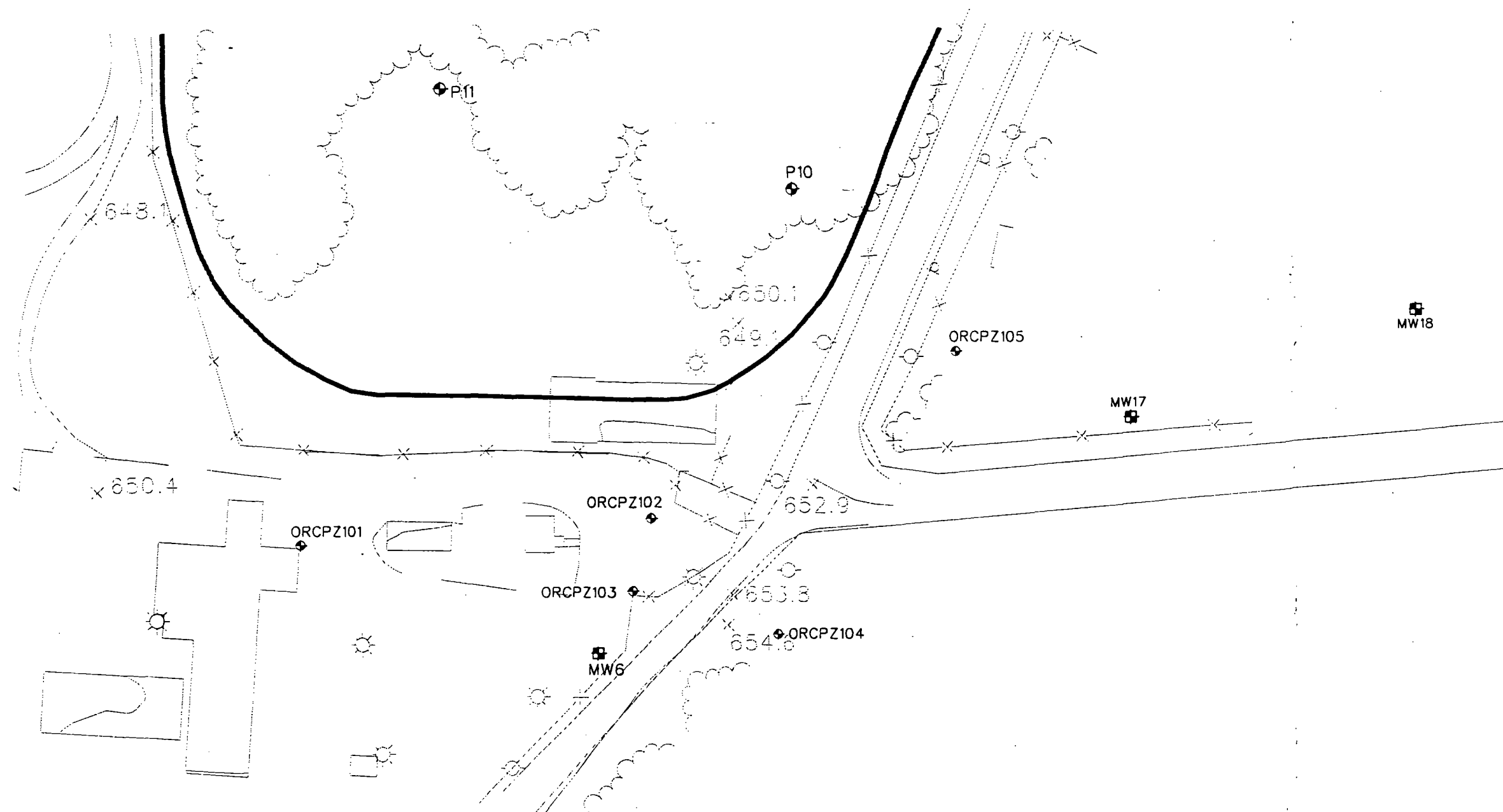
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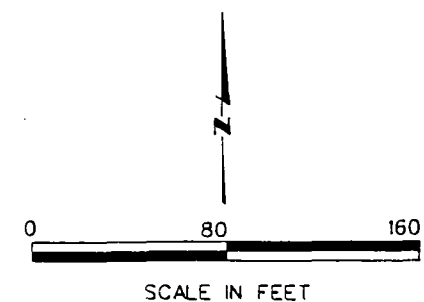


LEGEND

- BARRIER WALL
- UPPER AQUIFER WELL LOCATION AND DESIGNATION
- P61 PIEZOMETER LOCATION AND DESIGNATION
- STAFF GAUGE LOCATION AND DESIGNATION
- SURFACE DISCHARGE LOCATION FOR PERIMETER GROUND WATER CONTAINMENT SYSTEM
- ORCPZ1 ORC PIEZOMETER LOCATION AND DESIGNATION

NOTES

1. GROUNDWATER ELEVATIONS FOR WATER TABLE CONTOURS WERE MEASURED AT THE SITE ON MARCH 27, 2001.



REV	DATE	BY	DESCRIPTION

DESIGNED	CAS	DATE	5/5/2001
CHECKED	SAF	DATE	
APPROVED	PJV	DATE	

SCALE
AS SHOWN



MONTGOMERY WATSON
Chicago, Illinois

AMERICAN CHEMICAL SERVICES, INC.
NPL SITE
GRIFFITH, INDIANA

LOCATIONS OF ORC
PIEZOMETERS

FIGURE

1

**MWH**

MONTGOMERY WATSON HARZA

October 9, 2001

Kevin Adler
Remedial Project Manager
Region V, Mail Code SR-J6
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – September 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the American Chemical Services, Inc. (ACS) National Priority List (NPL) Site in Griffith, Indiana (Site). It has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001, and covers the activities undertaken at the Site during the month of September 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Drum Removal in On-Site Containment Area (1.c.)

The overpacked drums are being stored on the drum containment pad and drum carcasses are being stored in roll-off boxes. The drums, roll-off boxes, and staging pad are inspected daily for any signs of leakage or degradation.

The PRP group met with MWH on September 14, 2001 via conference call to discuss the three disposal facilities being considered. Currently, MWH is working out contract details with the selected incineration vendor. After the contract is signed between MWH and the vendor, MWH will send out a memo to the Agencies and PRP group prior to any actions taking place. The memo will detail the disposal plan and schedule to be followed.

MWH continues to work with U.S. EPA and IDEM for management and disposal. MWH had previously received a 30-day time extension from the state of Indiana. We understand that John Crawford of IDEM indicated that an additional time extension cannot be granted, however the state can be flexible since the PRP group is working with a disposal facility to set a date for disposal.

PCB Sediment Excavation from Wetland (1.d.)

Midwest Environmental Inc. (MEI) completed the wetland excavation of PCB-impacted sediment on August 23, 2001. Confirmation samples were collected from 42 locations along the floor and sidewalls of the excavation. Locations were further excavated and re-sampled as needed based upon confirmation results. Final analytical results indicate that all locations sampled have met the cleanup objective of 1 part per million (ppm) PCBs. Area Survey completed the survey of the final extents of the PCB-impacted soil excavation on September 13, 2001. Attached is Table 1 that summarizes confirmation sample analytical results. Figure 1, also attached, depicts the final extents of the excavation and the confirmation sample locations.

Restoration of the wetlands began on September 4, 2001 and was completed on September 24, 2001. The eastern portion of the excavated area was restored by backfilling to original grade. Volunteer prairie grasses and plants will be allowed to populate the area. The majority of the remaining portion of the excavated area was restored as an open water pond extending to a depth of approximately eight feet. Excavated material removed during the pond construction was stockpiled in the eastern portion of the Off-Site Area nearest Colfax Avenue and secured with silt fencing. This stockpile is intended for later use as root zone in the final cap installation within the engineered areas of the Off-Site Area.

Groundwater Plume Treatment (1.e.)

The fifth round of groundwater sampling of the five piezometers of the South Area ORC[®] Pilot Study was conducted on September 26, 2001 in conjunction with the quarterly groundwater monitoring event. This was the fourth round of sampling conducted after the ORC[®] application. Analytical results will be included in a future monthly status report. The final sampling round of the pilot study, the sixth round, will be conducted during November 2001.

In-Situ Vapor Extraction (ISVE) System for Off-Site Containment Area (2.a.)

Boart Longyear & Associates (BLA) began installation of ISVE wells in the Off-Site Area on August 29, 2001. BLA completed the 12 wells in the Kapica Pazmey (K-P) Area on August 30, 2001 and completed the 30 wells in the Off-Site Containment Area (OFCA) on September 12, 2001. BLA installed the three Air Sparge wells in the OFCA on September 13, 2001. The wells were installed as designed and have been extended and capped approximately five feet above the ground. Drilling work for the ISVE system was conducted in Level B personal protective equipment (PPE). All cuttings generated from the drilling activities were placed in a roll-off box for later disposal. The roll-off box has been moved to the On-Site Area for temporary storage.

The concrete pad for the blower shed was poured on September 6, 2001. Concrete cylinders were collected for compression testing by Great Lakes Soil & Environmental after 4, 14, and 28 days. The final 28 day compression test, conducted on October 4, 2001, demonstrated that the concrete pad has exceeded the design strength. A protective coating was placed on the concrete blower shed pad September 20, 2001. A crane placed the prefabricated blower shed on the concrete pad on September 25, 2001.

Austgen Electric began installing the motor control center (MCC) for the ISVE system on October 1, 2001. They are scheduled to complete the MCC by the end of October 2001. Prospective bidders are currently reviewing the Request for Bid (RFB) to install the yard piping which will connect the ISVE wells and the blower shed. Delivery of the custom-built oxidizer unit for vapor treatment has been postponed until mid-December 2001 due to manufacturing delays.

Northern Indiana Power Supply Company (NIPSCO) installed a permanent power pole along Colfax Avenue during the week of September 17, 2001 to feed the Blower Shed in the Off-Site Area. Encapsulated surface lines have been installed between the NIPSCO pole and control box that Austgen Electric has installed inside the Off-Site Area fence.

Barrier Wall Extraction System (BWES) Upgrades - Off-Site Area (3.b.)

Permanent pumps have been installed in several of the extraction wells in the Off-Site Area. Austgen Electric has installed control boxes at each Off-Site Area Extraction Well locations. Electrical power is being supplied underground via a temporary power source until the MCC is completed. The final pumps and controls are scheduled to start operation on permanent power in late October 2001.

Extraction well EW-20 is still not extracting water as designed, requiring EW-20A, EW-20B, and EW-20C to be used to meet the design capacity. Contract Dewatering Services (CDS), the contractor who installed the well, has submitted a proposal for repairing the problem. Due to this construction sequencing, this task is being shown on the Project Schedule as extending beyond the anticipated baseline duration. The extraction capacity is performing to expectations within the defined schedule, but the job will not be shown as complete on the schedule until the permanent system equipment is installed and optimization has been performed.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

The Separation Barrier Wall construction was completed in March 2001. The completion documentation and drawings are being compiled and will be submitted to the U.S. EPA and IDEM.

Temporary Engineered Cover of Off-Site Area (5.a.)

Koester Environmental Services (KES) has completed the OFCA temporary engineered cover and demobilized September 7, 2001. Topsoil and seed has been placed in the non-engineered cover areas. One exception is the eastern edge of the site where material has been stockpiled from the construction of the pond in the wetland area. Slusser Company has placed approximately 75% of the erosion matting, and the remaining matting will be installed during October 2001.

PROJECT MANAGEMENT (6)

A copy of the updated construction schedule is attached. The current progress is shown on the attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

On-site construction meetings were held on September 6, 13, 20, and 27, 2001. Standing weekly meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

Due to a slow down in field construction activities, weekly construction meetings are not scheduled for October 4 and 11, 2001, but will resume on October 18, 2001.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Groundwater Treatment Plant (GWTP) continued to operate as designed during September 2001. The surge capacity of the GWTP was increased in order to accommodate potential increased dewatering from the wetlands during the construction of the open water pond. In August and September 2001, during the wetland excavation, the GWTP received the majority of its influent from the wetland area. It is also received influent from extraction well EW-10 in the On-Site Area, EW-11 in the Off-Site Area, and the Perimeter Groundwater Collection System (PGCS).

The GWTP resumed normal discharge to the wetland area via the existing three wetland discharge structures on September 25, 2001 after the completion of the wetland work. The GWTP is currently receiving influent from extraction well EW-10 in the On-Site Area; EW-11, EW-19, EW-20B, and EW-20C in the Off-Site Area; and the PGCS.

The monthly effluent compliance sample for the GWTP was collected on September 5, 2001. A summary of the analytical data for this sample is attached. No exceedences were reported. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, Third Quarter 2001.

The annual sediment sample was collected from the discharge outfall point of the GWTP on August 21, 2001. A summary of the analytical data for this sample is attached. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, Third Quarter 2001. Figure 2.1 is attached to show the sediment sampling location.

The Groundwater Treatment Plant Quarterly Report, First Quarter 2001 was sent to the Agencies on September 24, 2001.

Groundwater, Air Quality, Wetland, and Monitoring (B.7.)

MWH performed the September 2001 groundwater sampling round on September 25, 2001. Water levels were measured for the piezometers and monitoring wells currently part of the Long-Term Groundwater Monitoring Plan. Five monitoring wells were sampled as part of the long-term groundwater monitoring plan: MW-9R, MW-10C, MW-48, MW-49, and MW-56. Analytical results will be included in a future monthly status report.

MWH submitted to the Agencies a proposal to modify the Long-Term Groundwater Monitoring Plan. The proposal was sent September 20, 2001.

BLA installed ten piezometers in the Off-Site Area on September 16 and 17, 2001 to replace the piezometers removed or damaged during the installation of the Off-Site Cover. Consensus was reached among MWH, Black & Veatch, and BLA regarding the location for these replacement piezometers during a site walk on September 13, 2001. A sketch summarizing the decisions made was sent to the Agencies on September 13, 2001. The well installation work was conducted in Level C personal protective equipment (PPE) initially and downgraded to Level D PPE based upon air monitoring results. A map depicting the final locations of these piezometers will be included in a future monthly status report once they have been surveyed.

Only two original piezometers remain in the Off-Site Area, P-95 and P-96. MWH personnel have extended the piezometer P-95, constructed of PVC, to a height of three feet above the ground surface. It extended only inches above the ground surface following placement of the clay cover.


Residential Well Water Quality Monitoring (B.8.)

The annual residential well monitoring will be conducted during October 2001, per the letter sent by MWH to the Agencies on September 17, 2001. The sampling is tentatively scheduled for the week of October 15, 2001. MWH personnel will contact the residents and arrange for sampling dates.

The next monthly report will be forwarded to U.S. EPA and IDEM by November 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON HARZA


Joseph D. Adams, Jr., P.E.
Project Coordinator

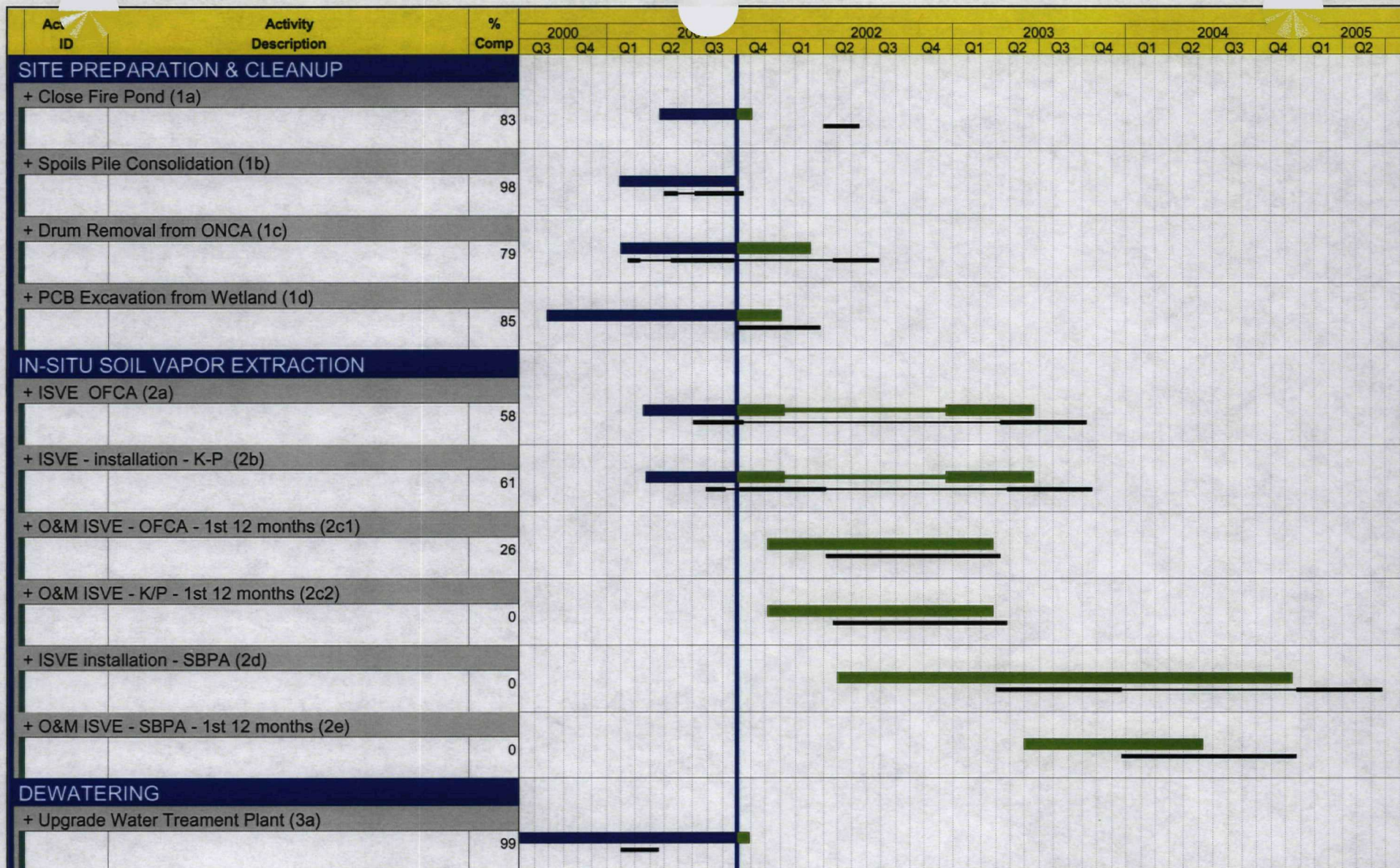
Enclosures:

Updated Schedule of Remedial Activities
Table 1 – Wetland Excavation Confirmation Sample Results
Figure 1- Wetland Excavation Confirmation Sample Locations
Table 2.2 – Summary of Effluent Analytical Results for September 5, 2001
Table 2.3 – Summary of Sediment Analytical Results for August 21, 2001
Figure 2.1 – Annual Sediment Sample Collection Location

cc: FILE

Barbara Magel
Mark Travers
Larry Campbell
Rob Adams
Pete Vagt
Travis Klingforth

TMK/RAA/PJV/TJT/TMK/PJV
J:\209\0601 ACS\0202 MWA PM\msr\Oct01_final.doc
2090602.0202



Data Date 01OCT01
Run Date 08OCT01 14:22

 Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAG

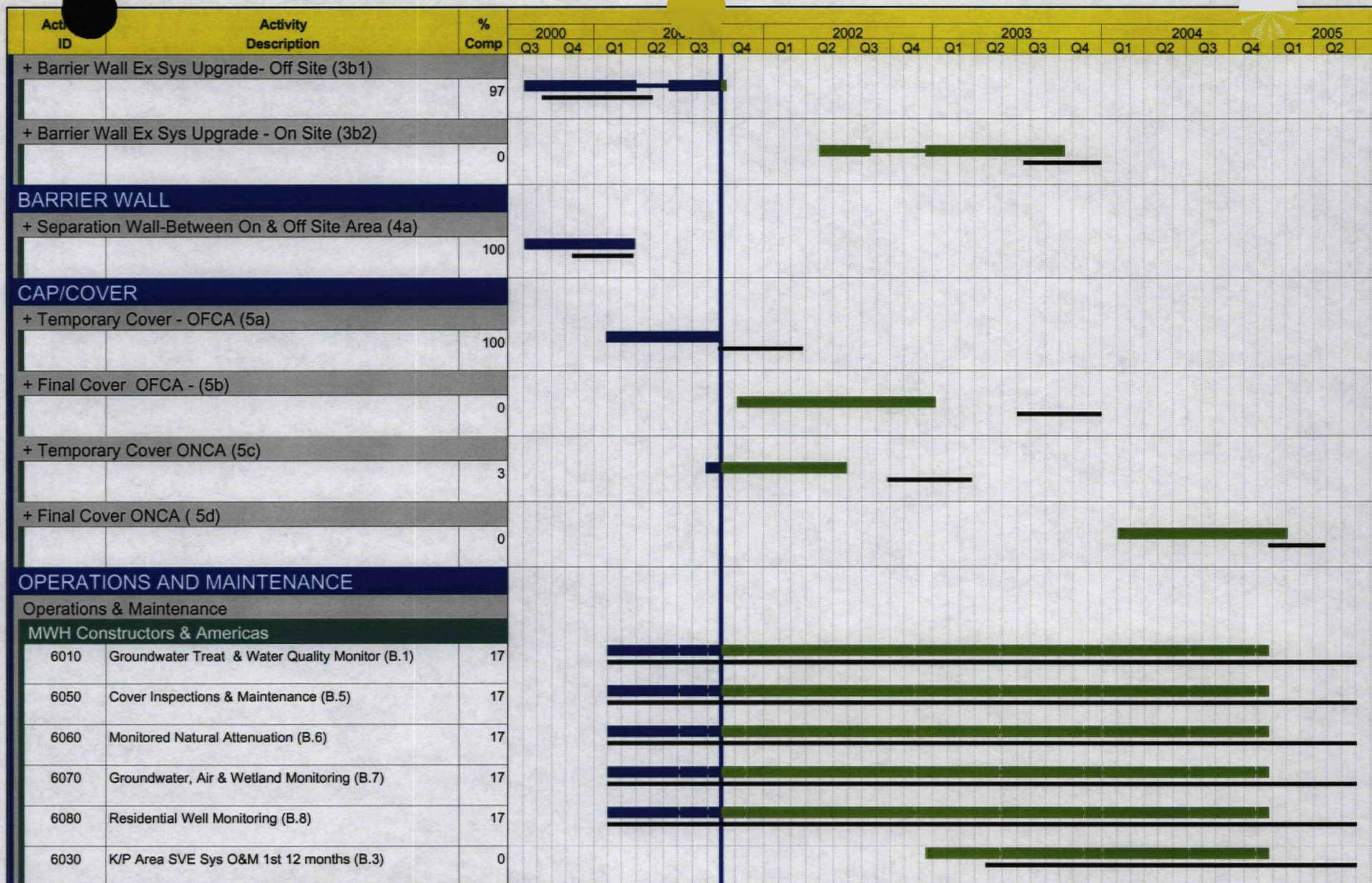
ACS NPL SITE REMEDIAL ACTION

Current Progress (Bar)
vs
CD Schedule (line)

End of September 2001 Report

Sheet 1 of 3





Data Date 01OCT01
Run Date 08OCT01 14:22

Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAG

ACS NPL SITE REMEDIAL ACTION

Sheet 2 of 3

Current Progress (Bar)
vs
CD Schedule (line)

End of September 2001 Report



Act ID	Activity Description	% Comp	2000		2001		2002				2003				2004				2005	
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
6020	OFCA SVE Sys O&M 1st 12 months (B.2)	0																		
6040	SBPA SVE Sys O&M after 1st 12 months (B.4)	0																		
+ Montgomery Watson Harza Americas																				
		19																		
MANAGEMENT																				
+ MWA Management																				
		26																		

Data Date 01OCT01
Run Date 08OCT01 14:22

 Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACAG

ACS NPL SITE REMEDIAL ACTION

Sheet 3 of 3

Current Progress (Bar)

vs

CD Schedule (line)

End of September 2001 Report



MWH
MONTGOMERY WATSON HARZA

Table 1
Wetlands Excavation
Confirmation Sample Results
Compuchem Laboratories
ACS, NPL Site

Sample Identifier	Sample Identification	Date Sampled	PCB Concentrations (ug/kg)							Total PCBs (ug/kg)
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	
1	MWH-0108-001-001-SS	8/9/01	ND	ND	ND	ND	ND	54	ND	54
2	MWH-0108-002-001-SS	8/9/01	ND	ND	ND	ND	ND	18 J/	ND	18
3	MWH-0108-003-001-SS	8/9/01	ND	ND	ND	ND	ND	8.7 J/	ND	9
4	MWH-0108-004-001-SS	8/20/01	ND	ND	ND	ND	ND	10 J/	ND	10
5	MWH-0108-005-001-SS	8/9/01	ND	ND	ND	ND	ND	ND	ND	ND
6	MWH-0108-006-001-SS	8/9/01	ND	ND	ND	ND	ND	150	ND	150
7	MWH-0108-007-001-SS	8/9/01	ND	ND	ND	ND	ND	ND	ND	ND
8 a	MWH-0108-008-001-SS	8/20/01	ND	ND	ND	ND	ND	3,400	ND	3,400
8 b	MWH-0108-008-002-SS	9/6/01	ND	ND	ND	ND	ND	ND	ND	ND
9	MWH-0108-009-001-SS	8/10/01	ND	ND	ND	ND	ND	13 J/	ND	13
10	MWH-0108-010-001-SS	8/10/01	ND	ND	ND	ND	ND	4.9 J/	ND	5
11	MWH-0108-011-001-SS	8/20/01	ND	ND	ND	ND	ND	59	ND	59
12	MWH-0108-012-001-SS	8/10/01	ND	ND	ND	ND	ND	810	ND	810
13	MWH-0108-013-001-SS	8/10/01	ND	ND	ND	ND	ND	3.5 J/	ND	4
14	MWH-0108-014-001-SS	8/20/01	ND	ND	ND	ND	ND	13 J/	ND	13
15	MWH-0108-015-001-SS	8/21/01	ND	ND	ND	ND	ND	18 JP/	ND	18
16	MWH-0108-016-001-SS	8/13/01	ND	ND	ND	ND	ND	110	ND	110
17	MWH-0108-017-001-SS	8/10/01	ND	ND	ND	ND	ND	6.7 JP/	ND	7
18	MWH-0108-018-001-SS	8/13/01	ND	ND	ND	ND	ND	14 J/	ND	14
19	MWH-0108-019-001-SS	8/13/01	ND	ND	ND	ND	ND	11 JP/	ND	11
20	MWH-0108-020-001-SS	8/13/01	ND	ND	ND	ND	ND	ND	ND	ND
21	MWH-0108-021-001-SS	8/14/01	ND	ND	ND	ND	ND	590	ND	590
22	MWH-0108-022-001-SS	8/21/01	ND	ND	ND	ND	ND	16 JP/	ND	16
23	MWH-0108-023-001-SS	8/13/01	ND	ND	ND	ND	ND	ND	ND	ND
24 a	MWH-0108-024-001-SS	8/21/01	ND	ND	ND	ND	ND	6,000	ND	6,000
24 b	MWH-0108-024-002-SS	8/31/01	ND	ND	ND	ND	ND	ND	ND	ND
25	MWH-0108-025-001-SS	8/15/01	ND	ND	ND	ND	ND	330	ND	330
26	MWH-0108-026-001-SS	8/21/01	ND	ND	ND	ND	ND	480 JP/	ND	480
27	MWH-0108-027-001-SS	8/14/01	ND	ND	ND	ND	ND	40 P/	ND	40 P/
28 a	MWH-0108-028-001-SS	8/22/01	ND	ND	ND	ND	ND	5,800	4200 P/	10,000
28 b	MWH-0108-028-002-SS	9/6/01	ND	ND	ND	ND	ND	54	ND	54
29	MWH-0108-029-001-SS	8/14/01	ND	ND	ND	ND	ND	110	ND	110
30 a	MWH-0108-030-001-SS	8/21/01	ND	ND	ND	ND	ND	29,000	ND	29,000
30 b	MWH-0108-030-002-SS	8/31/01	ND	ND	ND	ND	ND	ND	ND	ND
31	MWH-0108-031-001-SS	8/15/01	ND	ND	ND	ND	ND	260	ND	260
32	MWH-0108-032-001-SS	8/22/01	ND	ND	ND	ND	ND	260	180 P/	440
33	MWH-0108-033-001-SS	8/22/01	ND	ND	ND	ND	ND	120	69	189
34 a	MWH-0108-034-001-SS	8/22/01	ND	ND	ND	ND	ND	1,400	980	2,380
34 b	MWH-0108-034-002-SS	9/6/01	ND	ND	ND	ND	ND	ND	ND	ND
35 a	MWH-0108-035-001-SS	8/23/01	ND	ND	ND	ND	ND	1,500	590 P/	2,090
35 b	MWH-0108-035-002-SS	9/6/01	ND	ND	ND	ND	ND	ND	ND	ND
36	MWH-0108-036-001-SS	8/23/01	ND	ND	ND	ND	ND	64	17 J/	81
37 a	MWH-0108-037-001-SS	8/23/01	ND	ND	ND	ND	ND	2,400	2,400	4,800
37 b	MWH-0108-037-002-SS	9/6/01	ND	ND	ND	ND	1,800	1,100 P/	600 P/	3,500
37 c	MWH-0108-037-003-SS	9/26/01	ND	ND	ND	ND	35	24 J/	ND	59
38	MWH-0108-038-001-SS	8/14/01	ND	ND	ND	ND	ND	74	ND	74
39	MWH-0108-039-001-SS	8/14/01	ND	ND	ND	ND	ND	240	ND	240
40	MWH-0108-040-001-SS	8/23/01	ND	ND	ND	ND	ND	540	320	860
41	MWH-0108-041-001-SS	8/23/01	ND	ND	ND	ND	ND	120	82 P/	202
42 a	MWH-0108-042-001-SS	8/23/01	ND	ND	ND	ND	ND	3,200	2,000	5,200
42 b	MWH-0108-042-002-SS	8/31/01	ND	ND	ND	ND	920	770	510	2,200
42 c	MWH-0108-042-003-SS	9/26/01	ND	ND	ND	ND	16 JP/	6.9 J/	ND	23

Notes:

Data has not yet been validated

ND = Not detected

a, b, c = At some locations, multiple samples were collected after further excavation

Cleanup Objective = 1,000 ug/kg

Suffix Definitions:

_ / = Data qualifier added by laboratory

_ / = Data qualifier added by data validator

B = Compound is also detected in the blank

J = Result is detected below the reporting limit and is an estimated concentration

P = The Relative Percent Difference (RPD) between the two GC column values is greater than 40%. The higher value has been reported.

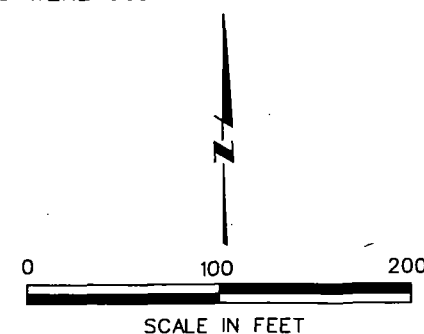
JB = Analyte is detected in the sample below the reporting limit and is an estimated concentration. The compound is also detected in the method blank resulting in a potential high bias.

UB = Analyte is not detected at or above the indicated concentration due to blank contamination.

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

JP = Result is detected below the reporting limit and is an estimated concentration. Also, the Relative Percent Difference (RPD) between the two GC column values is greater than 40%. The higher value has been reported.

- LEGEND**
- FLOOR CONFIRMATION SAMPLE
 - SIDEWALL CONFIRMATION SAMPLE
 - 50- ANTICIPATED PCB CONCENTRATIONS GREATER THAN 50 ppm
 - 1- ANTICIPATED PCB CONCENTRATIONS GREATER THAN 1 ppm
 - EXCAVATION EXTENTS
 - 42a ■ AT SOME LOCATIONS, MULTIPLE SAMPLES WERE COLLECTED AFTER FURTHER EXCAVATION



SCALE
1"=100'



MWH
MONTGOMERY WATSON HARZA

AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

CONFIRMATION SAMPLING LOCATIONS FOR
PCB-IMPACTED SOIL REMOVAL

FIGURE
1

SAMPLE ID	NORTHING	EASTING
1	4301.13	7281.86
2	4354.55	7296.45
3	4347.67	7254.39
4	4381.30	7265.86
5	4414.73	7287.27
6	4395.16	7213.40
7	4466.15	7277.33
8	4460.80	7231.45
9	4488.32	7245.98
10	4481.44	7195.51
11	4506.67	7219.21
12	4551.00	7249.80
13	4528.07	7191.69
14	4553.30	7213.10
15	4598.40	7224.57
16	4590.75	7180.22
17	4588.20	7135.12
18	4619.80	7200.17
19	4633.56	7247.58
20	4667.20	7266.70
21	4690.18	7237.64
22	4713.10	7208.59
23	4725.22	7288.30
24	4742.47	7225.08
25	4776.11	7245.91
26	4800.57	7218.28
27	4771.83	7146.20
28	4821.70	7208.59
29	4841.65	7158.77
30	4858.10	7206.92
31	4889.79	7225.71
32	4879.22	7175.33
33	4910.92	7123.66
34	4946.13	7216.43
35	4935.57	7168.28
36	4958.42	7132.83
37	5030.65	7163.59
38	4617.15	7257.97
39	4406.40	7299.39
42a	5027.09	7143.15
42b	5025.22	7141.95
42c	5021.22	7139.46

Table 2.2
Summary of Effluent Analytical Results - Third Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 52 9/5/01	Effluent Limits	Lab Reporting
pH	7.92	6-9	none
TSS	ND	30	10
BOD	ND	30	2
Arsenic	3.1 B/	50	3.4
Beryllium	ND	NE	0.2
Cadmium	ND	4.1	0.3
Manganese	18.8	NE	10
Mercury	ND	0.02 (w/DL = 0.64)	0.1
Selenium	ND	8.2	4.3
Thallium	ND	NE	5.7
Zinc	1.8 B/	411	1.2
Benzene	ND	5	0.5
Acetone	ND	6,800	3
2-Butanone	ND	210	3
Chloromethane	ND	NE	0.5
1,4-Dichlorobenzene	0.08 JB/	NE	0.5
1,1-Dichloroethane	ND	NE	0.5
cis-1,2-Dichloroethene	ND	70	0.5
Ethylbenzene	ND	34	0.5
Methylene chloride	ND	5	0.6
Tetrachloroethene	ND	5	0.5
Trichloroethene	ND	5	0.5
Vinyl chloride	ND	2	0.5
4-Methyl-2-pentanone	ND	15	3
bis (2-Chloroethyl) ether	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate	ND	6	6
4 - Methylphenol	ND	34	10
Isophorone	ND	50	10
Pentachlorophenol	ND	1	1
PCB/Aroclor-1016	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Shaded cells indicate discharge exceedances.

pH data is expressed in S.U.

TSS and BOD5 data is expressed in mg/L.

Metals, VOC, SVOC and PCB data is expressed in ug/L.

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Approved SW-846 method is incapable of achieving effluent limit.

Suffix Definitions:

/ = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias

UB = Analyte is not detected at or above the indicated concentration due to blank contamination

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

Table 2.3
Summary of Sediment Analytical Results - Third Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

PCB Compound	Results (ug/kg)	Results (ug/kg)
	8/21/01	8/21/2001 DUP
Aroclor-1221	ND	ND
Aroclor-1232	ND	ND
Aroclor-1242	ND	ND
Aroclor-1248	ND	ND
Aroclor-1254	73 P/	39 JP/
Aroclor-1260	ND	ND
Total PCBs	73	39

Notes:

Data has not yet been validated

ND = Not detected

DUP = Duplicate sample

Suffix Definitions:

/ = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

B = Compound is also detected in the blank

J = Result is detected below the reporting limit and is an estimated concentration

P = The Relative Percent Difference (RPD) between the two GC column values is greater than 40%. The higher value has been reported.

JB = Analyte is detected in the sample below the reporting limit and is an estimated concentration. The compound is also detected in the method blank resulting in a potential high bias.

UB = Analyte is not detected at or above the indicated concentration due to blank contamination.

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

JP = Result is detected below the reporting limit and is an estimated concentration.

Also, the Relative Percent Difference (RPD) between the two GC column values is greater than 40%. The higher value has been reported.

**MWH**

MONTGOMERY WATSON HARZA

November 9, 2001

Kevin Adler
Remedial Project Manager
Region V, Mail Code SR-J6
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – October 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the American Chemical Services, Inc. (ACS) National Priority List (NPL) Site in Griffith, Indiana (Site). The report has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001; it covers the activities undertaken at the Site during the month of October 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Drum Removal in On-Site Containment Area (1.c.)

A contract with Onyx Environmental Services of Port Arthur, Texas was awarded for the disposal of the overpacked drums and drum debris collected in roll-off boxes and was signed on October 25, 2001. On the same day, Onyx collected several of the split sample jars gathered by MWH and Koester Environmental Services (KES) during the drum removal for further review and characterization confirmation. From the KES Hazcat results and the additional analyses, Onyx has created four wastestream profiles that are acceptable to incinerate all of the overpacked drums and debris. Therefore, no additional sampling or analyses are required or will be performed.

The overpacked drums currently stored on the On-Site Area drum pad will be labeled, loaded, and transported off site by Onyx and Midwest Environmental, Inc. (MEI) during the week of November 5, 2001. After the overpacked drums are removed from the Site, MEI will empty each roll-off box of drum debris onto the drum pad for resizing to the dimensions necessary for processing at the Onyx facility. The resized debris will then be placed into Onyx containers for transportation and disposal beginning the week of November 12, 2001. The drum waste handling process was described in more detail in a memo sent to the U.S. EPA and IDEM on October 30, 2001.

PCB Sediment Excavation from Wetland (1.d.)

As reported in previous monthly status reports, Midwest Environmental Inc. (MEI) has completed the wetland excavation of PCB-impacted sediment. Confirmation samples have indicated that all locations sampled have met the cleanup objective of 1 part per million (ppm) PCBs. On November 1, 2001 MEI backfilled the gravel roadbed which had been excavated during the sediment removal. MEI also further shaped the previously-backfilled area east of the newly constructed pond for improved drainage. Wetland remediation and restoration is now complete. Drawings and other completion documentation will be generated and submitted at a future date.

Groundwater Plume Treatment (1.e.)

The fifth round of groundwater sampling of the five piezometers of the South Area ORC[®] Pilot Study was conducted on September 26, 2001 in conjunction with the quarterly groundwater monitoring event. This was the fourth round of sampling conducted after the ORC[®] application. Analytical results are attached in Table 1. The final sampling round of the pilot study, the sixth round, will be conducted during November 2001.

In-Situ Vapor Extraction (ISVE) System for Off-Site Containment Area (2.a.)

As reported in last month's status report, Boart Longyear & Associates (BLA) completed the installation of ISVE wells in the Off-Site Area and in the Kapica Pazmey (K-P) Area during September 2001. The roll-off box containing soil cuttings from the drilling activities has been moved to the On-Site Area for temporary storage. The material will be placed in the Fire Pond spoil management area during November 2001. This is an area that will be treated by ISVE in the future.

Bids have been received by MWH for the installation of the yard piping which will connect the ISVE wells and the blower shed. The contract will be awarded to Heritage Industrial Services (HIS). The contract will be signed during the week of November 5, 2001. HIS is scheduled to mobilize to the ACS site and receive materials during the week of November 19, 2001. Site work is scheduled to begin on November 26, 2001. Construction will last approximately three weeks.

Submittals have been received from the manufacturer of the thermal oxidizer unit. The final decision regarding instrumental and control components has not yet been made. The unit is expected to arrive on site by mid-December 2001. Start-up of the ISVE system is currently scheduled to occur in January 2002.

Northern Indiana Power Supply Company (NIPSCO) installed a permanent power pole along Colfax Avenue during September 2001 to feed the Blower Shed in the Off-Site Area. NIPSCO has requested that MWH alter the connection between the main power line on Colfax Avenue and the control box inside the fence of the Off-Site Area by installing a buried conduit under the rip rap swale. This alteration work is scheduled to be performed during the week of November 5, 2001. Upon completion, NIPSCO will install the meter and permanent power will be available in the Off-Site Area.

Austgen Electric installed the motor control center (MCC) in the Off-Site Area ISVE blower shed during the week of October 8, 2001. Upon the completion of permanent power to the Off-Site Area by NIPSCO, the MCC will be energized to power the ISVE system and Off-Site Area Barrier Wall Extraction System (BWES).

Barrier Wall Extraction System (BWES) Upgrades (3.b.)

Permanent pumps were installed in extraction wells EW-12, EW-13, EW-15, EW-16, EW-20, and EW-20A during the week of October 15, 2001. These pumps are currently powered by a temporary electrical source. The pumps will begin operation using the permanent power source after NIPSCO has installed a metering box for the permanent power supply to the Off-Site Area.

Contract Dewatering Services (CDS) mobilized on site on October 29, 2001 to complete the installation of extraction well EW-20C. CDS is scheduled to finish the installation by mid-November, 2001. Due to this construction sequencing, this task is being shown on the Project Schedule as extending beyond the anticipated baseline duration. The extraction capacity is performing to expectations within the defined schedule, but the job will not be shown as complete on the schedule until the permanent system equipment is installed and optimization has been performed.

Slusser Company, the subcontractor who installed the erosion matting and grass seed for the temporary engineered cover of Off-Site Area, will return to the site after CDS has completed their work at extraction well EW-20C. Slusser will install erosion matting and grass seed to restore the area disturbed by CDS activities to its previous condition at the completion of the cover.

As a contingency to provide extra dewatering capacity for the On-Site Area now that the Fire Pond has been closed, an additional extraction point will be constructed by MWH during November or December 2001. This extraction point will be available for short-term groundwater level control of the On-Site Area.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

The Separation Barrier Wall construction was completed in March 2001. The completion documentation and drawings are being compiled and will be submitted to the U.S. EPA and IDEM.

Temporary Engineered Cover of Off-Site Area (5.a.)

Koester Environmental Services (KES) completed the Off-Site Area temporary cover during September and has demobilized from the Site. Slusser Company completed installation of erosion matting on October 9, 2001. This task is now complete. The completion documentation and drawings are being compiled.

PROJECT MANAGEMENT (6)

A copy of the updated construction schedule is attached. The current progress is shown on the attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

Standing weekly meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

There was a lull in construction activities during October and so only one weekly construction meeting on October 18, 2001 was held during that month.

A Resource Conservation and Recovery Act (RCRA) site inspection of the ACS operation was conducted on October 30, 2001 by an IDEM representative. The inspector stated that there were no violations at the time of the inspection. No citations were given.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Groundwater Treatment Plant (GWTP) continued to operate as designed during October 2001. The GWTP is currently receiving influent from extraction wells EW-10, EW-17, and EW-18 in the On-Site Area; EW-11, EW-12, EW-15, EW-16, EW-19, EW-20B, and EW-20C in the Off-Site Area; and the PGCS.

The monthly effluent compliance sample for the GWTP was collected on October 16, 2001. A summary of the analytical data for this sample is attached as Table 2.2. No exceedences were reported. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, Fourth Quarter 2001.

Groundwater, Air Quality, Wetland, and Monitoring (B.7)

As reported in last month's status report, MWH performed the September 2001 groundwater sampling round on September 25, 2001. Five monitoring wells were sampled as part of the long-term groundwater monitoring plan: MW-9R, MW-10C, MW-48, MW-49, and MW-56. The validated analytical results are attached as Tables 7, 8, and 9.

MWH submitted to the Agencies a proposal to modify the Long-Term Groundwater Monitoring Plan. The proposal was sent September 20, 2001. The timing of the next groundwater sampling round has not yet been determined, however it will likely occur during December 2001.

BLA installed ten piezometers in the Off-Site Area on September 16 and 17, 2001 to replace the piezometers removed or damaged during the installation of the Off-Site Cover. Figure 1 (attached) depicts the final surveyed locations of these piezometers.

Residential Well Water Quality Monitoring (B.8.)

The annual residential well monitoring was conducted on October 15, 2001. Four of the five residential homes that are part of the sampling program were sampled. The home at 1007 Reder Road could not be sampled because the home had been vacated and the well pump had been turned off due to a recent fire. Analytical results for the four wells will be included in future monthly status report.

The next monthly report will be forwarded to U.S. EPA and IDEM by December 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON HARZA

Joseph D. Adams, Jr., P.E.
Project Coordinator

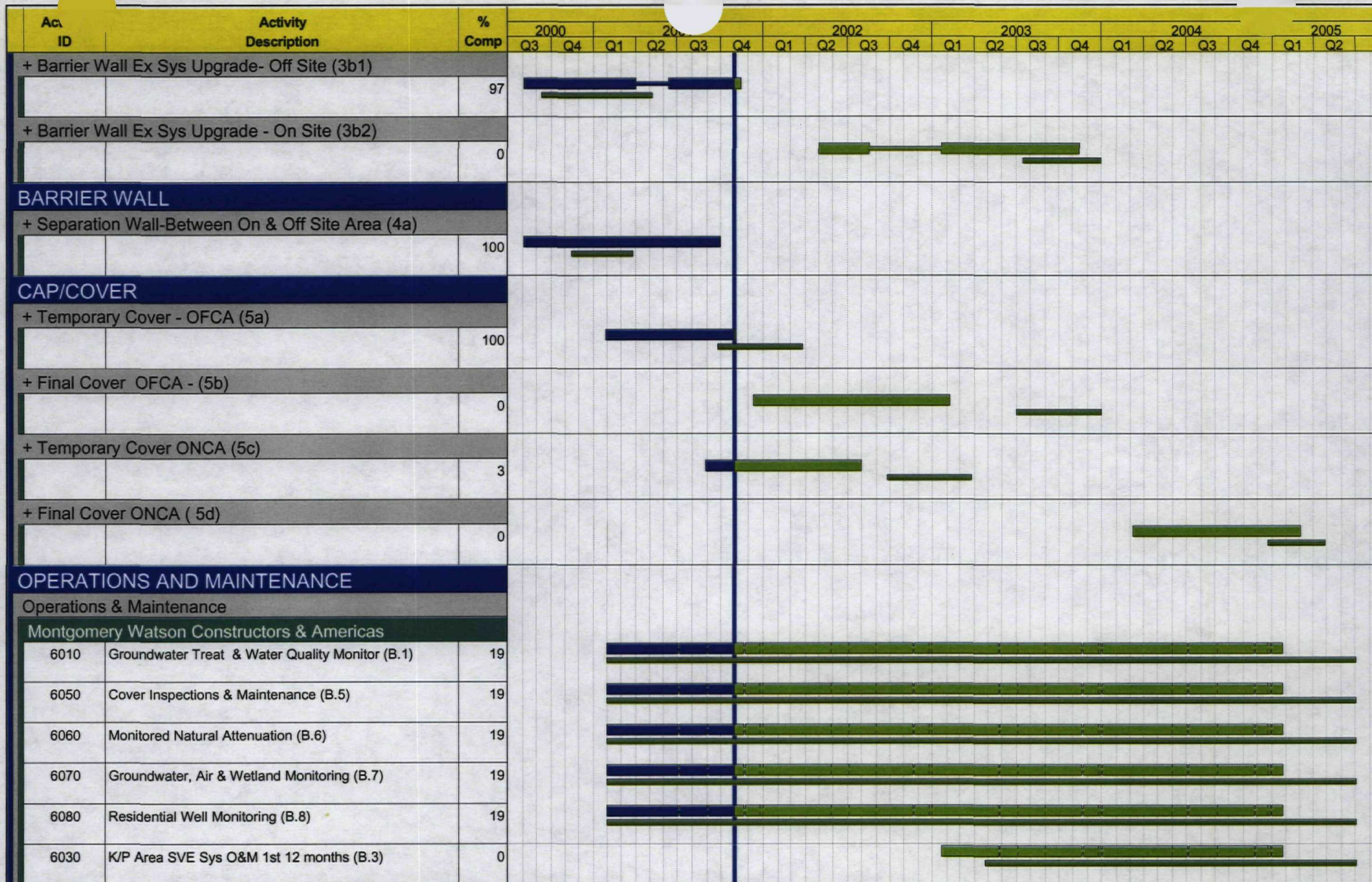
Enclosures:

- Updated Schedule of Remedial Activities
- Table 1 – ORC® South Area Analytical Results for September 2001
- Table 2.2 – Summary of Effluent Analytical Results for October 16, 2001
- Table 7 – Summary of Organic Compound Detections in the Upper Aquifer (September 2001)
- Table 8 – Summary of Organic Compound Detections in the Lower Aquifer (September 2001)
- Table 9 – Summary of Inorganic Baseline Exceedances (September 2001)
- Figure 1 – Piezometers in the Off-Site Area (Revised November 2001)

cc: FILE

- Barbara Magel – Karaganis White & Magel, Ltd.
- Mark Travers – Environ
- Larry Campbell – Black & Veatch
- Rob Adams – MWH
- Pete Vagt – MWH
- Travis Klingforth – MWH

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Run Date 08NOV01 08:54

Early Bar
 Target Bar
 Progress Bar
 Critical Activity

ACSL

ACS NPL SITE REMEDIAL ACTION

Sheet 2 of 3

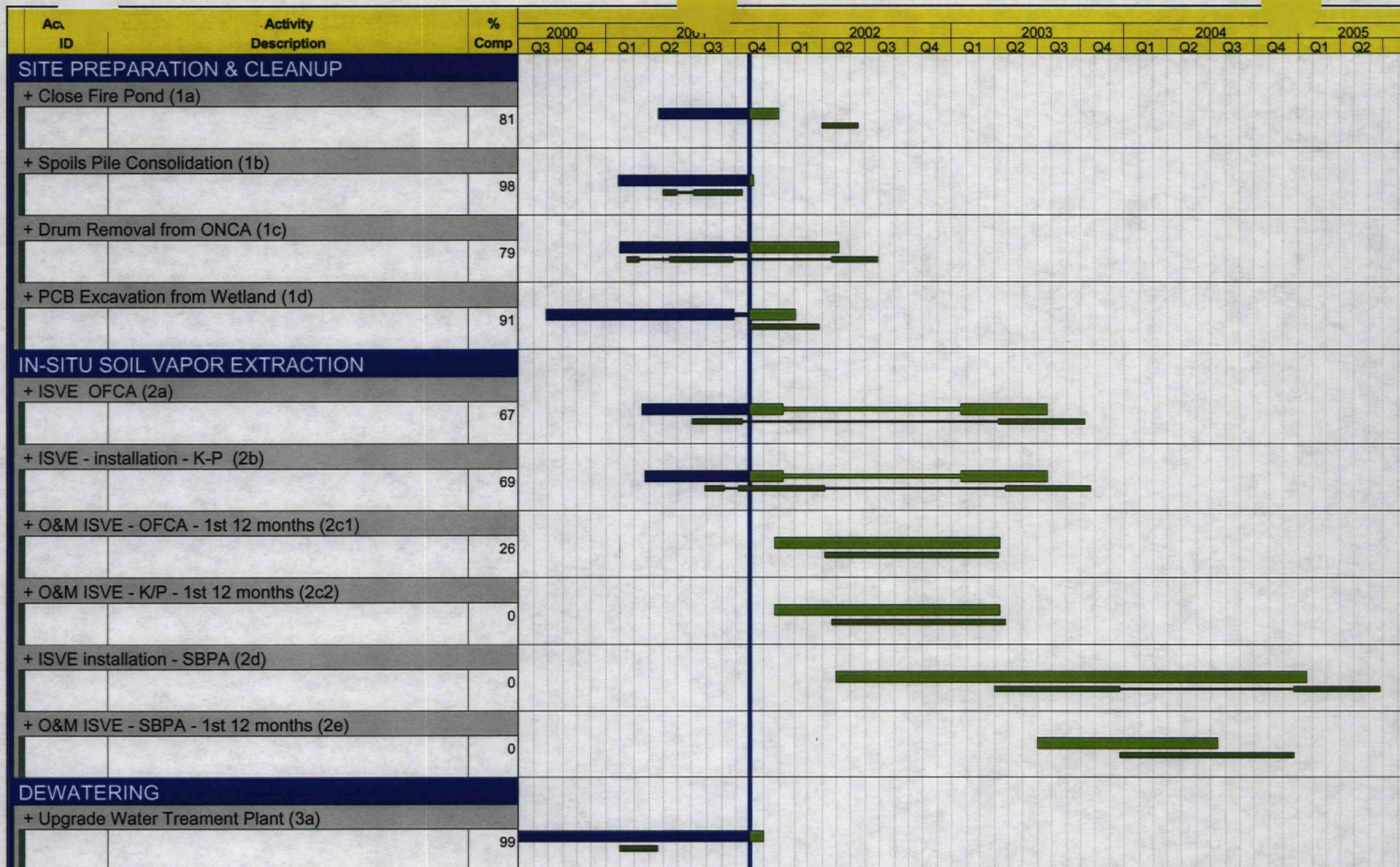
Current Progress (Bar)
vs
CD Schedule (line)

End of October 2001 Report



MWH
MONTGOMERY WATSON HARZA

Date	Revision	checked	approved



Data Date 01NOV01
Run Date 08NOV01 08:54

 Early Bar
 Target Bar
 Progress Bar
 Critical Activity

ACSL

ACS NPL SITE REMEDIAL ACTION

Sheet 1 of 3

Current Progress (Bar)
vs
CD Schedule (line)

End of October 2001 Report



MWH
MONTGOMERY WATSON HARZA

Date	Revision	checked	approved

Activity ID	Activity Description	% Comp																				
			2000		2001		2002		2003		2004		2005									
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
6020	OFCA SVE Sys O&M 1st 12 months (B.2)	0																				
6040	SBPA SVE Sys O&M after 1st 12 months (B.4)	0																				
+ Montgomery Watson Americas																						
		22																				
+ MANAGEMENT																						
		28																				

Data Date 01NOV01
Run Date 08NOV01 08:54

 Early Bar
 Target Bar
 Progress Bar
 Critical Activity

ACSL

ACS NPL SITE REMEDIAL ACTION

Sheet 3 of 3

Current Progress (Bar)
vs
CD Schedule (line)

End of October 2001 Report



MWH
MONTGOMERY WATSON HARZA

Date	Revision	checked	approved

Table 1
ORC South Area Analytical Results
ACS NPL Site

baseline					
ORCPZ101	Apr-01	May-01	Jun-01	Jul-01	Sep-01
Acetone					7 J
Benzene	410	200	180	530	910 D
Chloroethane	56	26 J	27	120	140
Chlorobenzene			3 J		5 J
Ethylbenzene	460	190	150	220	150
Methylene Chloride	8 J				2 J
Isopropylbenzene	21 J	17 J	20	32 J	48
trans-1,2-Dichloroethene			0.9 J		4 J
1,2-Dichlorobenzene			2 J		6 J
Xylene	3100 E	1100	1400 D	3400	4000 DE

ORCPZ102	Apr-01	May-01	Jun-01	Jul-01	Sep-01
Acetone					6 J
Benzene	650	290	93	6000	6200 D
Chlorobenzene					6 J
Chloroethane	200	99	65	580	370 D
Cyclohexane					4 J
Ethylbenzene	16 J	4 J		53 J	98
Methylene Chloride	18 J				4 J
Isopropylbenzene					13
Toluene					1 J
trans-1,2-Dichloroethene			2 J		11
1,4-Dichlorobenzene					3 J
1,2-Dichlorobenzene					16
Xylene	310	28		810	1600 D

ORCPZ103	Apr-01	May-01	Jun-01	Jul-01	Sep-01
Benzene	800				58
Chloroethane	73				34
Ethylbenzene	14 J				
Methylene Chloride	12 J				
Isopropylbenzene					
Xylene	470				

ORCPZ104	Apr-01	May-01	Jun-01	Jul-01	Sep-01
Acetone					6 J
Benzene	5 J		75	41	
Chloroethane	5 J		8 J	5 J	
Chlorobenzene			4 J	4 J	
Ethylbenzene				1 J	
Methylene Chloride	1 J				
Isopropylbenzene					
Xylene	50	1 J	51	14	

ORCPZ105	Apr-01	May-01	Jun-01	Jul-01	Sep-01
Benzene	590	340	380	290 J	280 D
Chlorobenzene	68	61 J	59		46
Chloroethane	130	38 J	88		160
Cyclohexane			14 J		14
1,1-Dichloroethane		37 J	44 J		11
1,2-Dichlorobenzene	12 J	37 J	49 J		71
1,3-Dichlorobenzene					4 J
1,4-Dichlorobenzene	49 J		12 J		16
1,2-Dichloropropane					3 J
Ethylbenzene	3100 E	2300	2600 D	2700	2000 DE
Methylene Chloride	9 J				
Methylcyclohexane	28 J	35 J	57	32 J	56
4-Methyl-2-Pentanone		19 J			
Isopropylbenzene	58	63 J	87	65 J	120
Toluene	63	180	240	310 J	220 E
1,1,1-Trichloroethane			7 J		0.9 J
1,2,4-Trichlorobenzene					2 J
Xylene	17000 E	8200	13000 D	14000	*6900 DE

Notes:

All concentrations in ug/L

Blank cells indicate parameter was not detected above detection limits

J - Indicates an estimated concentration. Analyte was detected below reporting limits.

D - Sample was diluted

E - Analyte concentration exceeded upper calibration limits of instrument.

Due to lab error, sample was not diluted and re-run.

* xylene probably higher in ORCPZ105 during 09/01

Table 2.2
Summary of Effluent Analytical Results - Fourth Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 53 10/16/01	Effluent Limits	Lab Reporting
pH	7.61	6-9	none
TSS	2.00	30	10
BOD	ND	30	2
Arsenic	ND	50	3.4
Beryllium	ND	NE	0.2
Cadmium	ND	4.1	0.3
Manganese	1.6 B/	NE	10
Mercury	ND	0.02 (w/DL = 0.64)	0.64
Selenium	1.9 B/	8.2	4.3
Thallium	ND	NE	5.7
Zinc	ND	411	1.2
Benzene	0.2 J/	5	0.5
Acetone	1 JB/	6,800	3
2-Butanone	1 JB/	210	3
Chloromethane	ND	NE	0.5
1,4-Dichlorobenzene	ND	NE	0.5
1,1-Dichloroethane	ND	NE	0.5
cis-1,2-Dichloroethene	ND	70	0.5
Ethylbenzene	ND	34	0.5
Methylene chloride	0.4 JB/	5	0.6
Tetrachloroethene	ND	5	0.5
Trichloroethene	0.03 JB/	5	0.5
Vinyl chloride	ND	2	0.5
4-Methyl-2-pentanone	ND	15	3
bis(2-Chloroethyl) ether	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate	1 J/	6	6
4 - Methylphenol	ND	34	10
Isophorone	ND	50	10
Pentachlorophenol	ND	1	1
PCB/Aroclor-1016	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Data has not yet been validated

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD5 data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Approved SW-846 method is incapable of achieving effluent limit.

Suffix Definitions:

/ = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias

U = Analyte is not detected at or above the indicated concentration

UB = Analyte is not detected at or above the indicated concentration due to blank contamination

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

Table 7
Summary of Organic Compound Detections in the Upper Aquifer
Validated Results - September 2001
American Chemical Service NPL Site
Griffith, Indiana

Parameter (VOCs - ug/L)	MW-48		MW-49	
	Jun-01	BV	Jun-01	BV
Benzene	2,800 D/	9,500	690	6,750
Chloroethane	100	1000	130	715

Notes:

ug/L = micrograms per liter

BV = Baseline Value

J/_ = Data qualifier added by laboratory

_/J = Data qualifier added by data validator

D = Results based on diluted sample

A blank cell indicates the parameter was
not detected.

Bold result indicates an exceedance of BV

Table 8
Summary of Organic Compound Detections in the Lower Aquifer
Validated Results - September 2001
American Chemical Service NPL Site
Griffith, Indiana

Parameter (VOCs - ug/L)	MW-09R		MW-10C		MW56	
	Sep-01	BV	Sep-01	BV	Sep-01	BV
Benzene	23	310	280	150	510 D/	NA
Chloroethane	680 D/	2,900	280	420	10	NA

Notes:

ug/L = micrograms per liter.

BV = Baseline Value

NA = Not Available

J/_ = Data qualifier added by laboratory

_J = Data qualifier added by data validator

J = Estimated value

A blank cell indicates parameter not detected.

Bold result indicates an exceedance of BV

Table 9
Summary of Inorganic Baseline Exceedances - September 2001
American Chemical Service NPL Site
Griffith, Indiana

Well	Potentially Significant Jun-01	Potentially Significant Sep-01	Arsenic		Lead		Total Number of EXCEEDANCES
			Sep-01	Baseline	Sep-01	Baseline	
UPPER AQUIFER WELLS							
MW-48			7.8				0.5
MW-49			17.8				0.5
LOWER AQUIFER WELL							
MW-09R							0
MW-56			2.4				0.5
Number of Exceedances			3		0		1.5

Notes:

1. No results for inorganic species in the September 2001 sampling results exceeded the maximum baseline concentraton for that species by a factor of 2x or more.
2. Blank cells indicate that for the September 2001 sampling round, the inorganic species did not exceed the baseline maximum.
3. The monitoring wells listed above were analyzed for Arsenic and Lead during June 2001.
4. R = Recurrence: Sample results are potentially significant due to recurrence of exceedance.
5. F = Frequency: Sample results are potentially significant due to the frequency of exceedance (>25% or 7 individual analytes).
6. M = Magnitude: Sample results are potentially significant due to magnitude of exceedance (>2x maxium baseline)

**MWH**

MONTGOMERY WATSON HARZA

December 7, 2001

Kevin Adler
Remedial Project Manager
Region V, Mail Code SR-J6
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – November 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the American Chemical Services, Inc. (ACS) National Priority List (NPL) Site in Griffith, Indiana (Site). The report has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001; it covers the activities undertaken at the Site during the month of November 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Drum Removal in On-Site Containment Area (1.c.)

The kickoff meeting for the drum disposal activities was held on November 2, 2001 with MWH, Onyx Environmental Services, Black & Veatch, Midwest Environmental, Inc. (MEI) and the ACS facility.

Onyx transported 227 overpacked drums to its Port Arthur, Texas disposal facility for incineration on November 5, 2001. Thirty-three drums of water which had been stored on the drum pad (22 overpacked drums excavated during the drum removal and 11 drums generated during previous site activities) were pumped to the Groundwater Treatment Plant (GWTP) for treatment and discharge beginning the week of November 12, 2001. The 31 drums which had been stored on the pad from previous site activities, including the

11 drums that had contained water as mentioned above, were also disposed of as outlined in the November 2, 2001 memo to the Agencies.

MEI began shearing and resizing drum debris on November 8, 2001. The drum debris had been stored in roll-off boxes from the drum removal earlier this year. After resizing, the debris was placed into Onyx roll-off boxes, which were then transported to Onyx's Port Arthur, Texas facility for incineration. The drum debris shearing and transportation process was completed on November 19, 2001.

In summary, 234 overpacked drums of material and 19 twenty-yard roll-off boxes were sent to Port Arthur, Texas for incineration. Certificates of Destruction have been received for all the overpacked drums sent to the Onyx facility. The drum disposal pad in the On-site Area has been decontaminated. The attached flow chart summarizes drum material disposal activities.

PCB Sediment Excavation from Wetland (1.d.)

As reported in previous monthly status reports, Midwest Environmental Inc. (MEI) completed the wetland excavation of PCB-impacted sediment during September 2001. The wetland was restored by creating an open water area. Drawings and other completion documentation are being generated and will be submitted at a future date. This report item will be dropped from future monthly progress reports. We have added a new heading at the end of this letter called "Report Schedule." When the PCB Sediment Excavation Construction Completion Report is completed, it will be documented in the new section, along with other completion reports.

Groundwater Plume Treatment (1.e.)

The sixth round of groundwater sampling of the five piezometers of the South Area ORC[®] Pilot Study was conducted on November 29 and 30, 2001. This was the fifth and final round of sampling conducted after the ORC[®] application. Analytical results will be included in a future monthly status report. A final report will also be written, summarizing the analytical results and conclusions that can be drawn from the pilot study.

In-Situ Vapor Extraction (ISVE) System for Off-Site Containment Area (2.a.)

Heritage Industrial Services (HIS) of Indianapolis, Indiana has been selected as the subcontractor to install the yard piping for the Off-Site Area ISVE system. MWH and HIS signed the contract on November 6, 2001. HIS participated in an informal pre-construction meeting on November 13, 2001. HIS began mobilization the week of November 19, 2001 and began pipe assembly on November 28, 2001. Pipe installation is expected to begin the week of December 3, 2001 and is anticipated to last three weeks if reasonable weather holds.

Fliteway Technologies will be on site the week of December 3, 2001 to perform work in the blower shed in preparation for the arrival of the blower unit. Fliteway has notified MWH that the blower is scheduled to arrive by mid-December 2001. The thermal oxidizer is scheduled to be delivered during the first part of January 2002. Austgen Electric is

completing the installation plan for the control system for the ISVE system. Start-up of the ISVE system is currently scheduled to occur in January 2002.

The soil cuttings generated from the installation of the Off-Site Area ISVE wells by Boart Longyear, which had been stored in a roll-off box since the completion of Boart Longyear's work, were placed in the Fire Pond Spoil Pile Management Area on November 14, 2001. This is an area that will be treated by ISVE in the future.

Permanent power became available in the Off-Site Area after Northern Indiana Power Supply Company (NIPSCO) completed installation of the power and meter box on November 8, 2001. The ISVE motor control center (MCC) and BWES Off-Site wells were connected to permanent power upon completion of NIPSCO's work.

Barrier Wall Extraction System (BWES) Upgrades (3.b.)

Contract Dewatering Services (CDS) mobilized on site on October 29, 2001 to complete the re-installation of extraction well EW-20C. Contract Dewatering Services (CDS) wore Level B Personal Protective Equipment (PPE) in completing the re-installation of extraction well EW-20C. Following the re-installation, the 15-foot excavation for the extraction well was backfilled. Then the clay cover was replaced on November 8, 2001 and re-compacted until it passed compaction testing. CDS completed the re-installation of extraction well EW-20C and demobilized on November 9, 2001. CDS has stated they will demobilize remaining equipment during December 2001. With the completion of EW-20C and the installation of the permanent power source, the BWES upgrade is complete.

Upgraded pumps were installed in extraction wells EW-12, EW-13, EW-15, EW-16, EW-20, and EW-20A during October 2001, as reported in last month's status report. The pumps, which had been powered by a temporary power source, began operation using a permanent power source on November 16, 2001 after NIPSCO installed a metering box for the permanent power supply to the Off-Site Area. The Off-Site Area BWES extraction wells resumed pumping to the GWTP on November 19, 2001.

Slusser Company, the subcontractor who installed the erosion matting and grass seed for the temporary engineered cover of Off-Site Area will return to the site in early December 2001. They will install erosion matting and grass seed to restore the EW-20C area to its previous condition at the completion of the cover.

As a contingency to provide extra dewatering capacity for the On-Site Area now that the Fire Pond has been closed, the construction of an additional extraction point is being evaluated. This extraction point would be available for short-term groundwater level control of the On-Site Area. Continued monitoring of the water level in the On-Site Area will determine the need for the extra capacity.

Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)

The Separation Barrier Wall construction was completed in March 2001. The completion documentation and drawings are being compiled and will be submitted to the U.S. EPA and IDEM during December 2001. This report item will be dropped from future monthly

progress reports. We have added a new heading at the end of this letter called "Report Schedule." When the Separation Barrier Wall Construction Completion Report is completed, it will be documented in the new section, along with other completion reports.

Temporary Engineered Cover of Off-Site Area (5.a.)

Koester Environmental Services (KES) completed the Off-Site Area temporary cover during September and has demobilized from the Site. Slusser Company completed installation of erosion matting on October 9, 2001. This task is now complete. The completion documentation and drawings are being compiled. This report item will be dropped from future monthly progress reports. We have added a new heading at the end of this letter called "Report Schedule." When the Off-Site Area Temporary Engineered Cover Construction Completion Report is completed, it will be documented in the new section, along with other completion reports.

Final Cover of Off-Site Area (5.d.)

During the completion of the Off-Site Area temporary cover during August and September 2001, KES also placed the final cover over all "non-engineered" areas of the Off-Site Area. The final cover will be placed on the engineered areas of the Off-Site Area during the summer of 2002.

PROJECT MANAGEMENT (6)

A copy of the updated construction schedule is attached. The current progress is shown on the attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

Standing weekly meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. During November 2001, weekly construction meetings were held on November 8, November 15, and November 29. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Groundwater Treatment Plant (GWTP) continued to operate as designed during November 2001. The Off-Site BWES wells were turned off during the completion of extraction well EW-20C for approximately four weeks. Active pumping resumed on December 3, 2001 from extraction wells EW-10, EW-11, EW-12, EW-13A, EW-15, EW-16, EW-19, EW-20B, EW-20C, the Perimeter Groundwater Containment System (PGCS), and MW-54. The carbon in the GWTP carbon filters was changed out on November 27, 2001 and was activated on November 28, 2001.

The monthly effluent compliance sample for the GWTP was collected on November 13, 2001. A summary of the analytical data for this sample is attached as Table 2.2. No exceedences were reported. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, Fourth Quarter 2001.

The Groundwater Treatment Plant Quarterly Report, Second Quarter 2001 will be submitted to the Agencies during December 2001.

Groundwater, Air Quality, Wetland, and Monitoring (B.7)

A meeting was held on November 29, 2001 following the weekly on-site construction meeting to discuss the Long-Term Groundwater Monitoring Plan. During the meeting the U.S. EPA, IDEM, MWH, and Black & Veatch discussed the revised Long-Term Groundwater Monitoring Plan, which had been proposed by MWH. As a result of the meeting, the next round of groundwater monitoring is scheduled for March 2002. MWH is preparing written responses to the Agency review comments and will submit them to the U.S. EPA and IDEM by the end of December 2001.

Residential Well Water Quality Monitoring (B.8.)

As reported previously, the annual residential well monitoring was conducted as part of the September 2001 sampling event. Due to scheduling delays, the residential wells were not sampled until October 15, 2001. Four of the five residential homes that are part of the sampling program were sampled. The home at 1007 Reder Road could not be sampled because the home had been vacated and the well pump had been turned off due to a recent fire. Analytical results for the four wells are attached to this monthly status report.

REPORT SCHEDULE

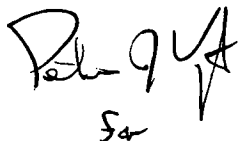
This section summarizes reports that are in progress or have recently been submitted to the U.S. EPA and IDEM.

- **PCB Sediment Excavation from Wetland (1.d.)** - the Construction Completion Report is in progress
- **Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)** - the Construction Completion Report will be submitted to the Agencies by the end of December 2001
- **Temporary Engineered Cover of Off-Site Area (5.a.)** - the Construction Completion Report is in progress
- **Treatment System Monitoring (B.1, 2, 3, 4)** - the Groundwater Treatment Plant Quarterly Report, Second Quarter 2001 will be submitted to the Agencies during early December 2001
- **Groundwater, Air Quality, Wetland, and Monitoring (B.7)** - the June 2001 Groundwater Monitoring Quarterly Report was submitted to the Agencies on October 26, 2001. The June 2001 Groundwater Monitoring Quarterly Report will be submitted to the Agencies by the end of December 2001.

The next monthly report will be forwarded to U.S. EPA and IDEM by January 10, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MONTGOMERY WATSON HARZA



Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures:

- Updated Schedule of Remedial Activities
- Drum Disposal Activities Flow Chart
- Table 2.2 – Summary of Effluent Analytical Results for November 13, 2001
- Table 10 – Summary of Organic Compound Detections in the Residential Wells
(September 2001 Sampling Event)
- Table 11 – Comparison of Private Well Detections to Maximum Contaminant Levels
(MCLs) (September 2001 Sampling Event)

cc: FILE

- Barbara Magel – Karaganis White & Magel, Ltd.
- Mark Travers – Environ
- Larry Campbell – Black & Veatch
- Rob Adams – MWH
- Pete Vagt – MWH
- Travis Klingforth – MWH

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Drum Waste Disposal

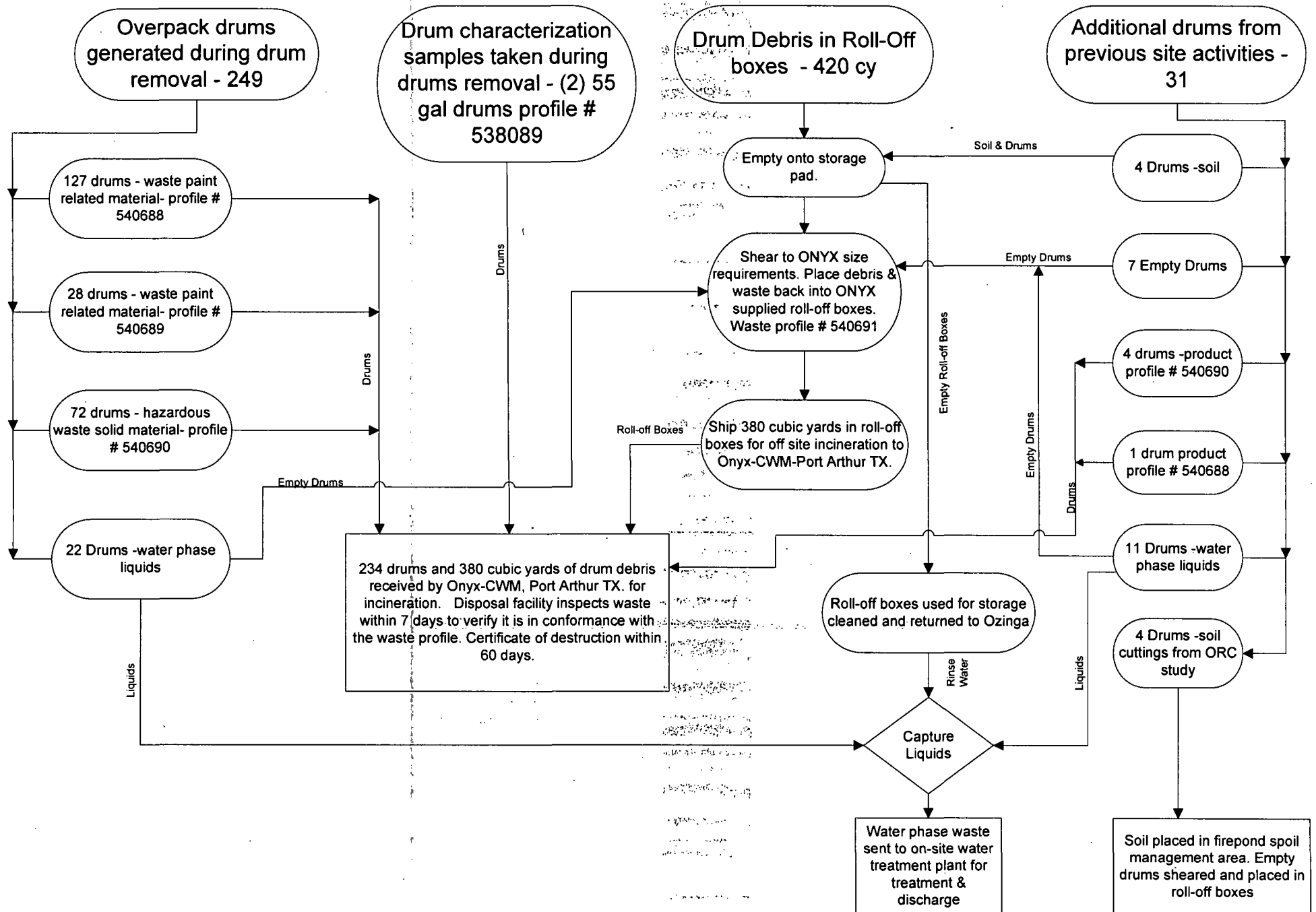


Table 2.2
Summary of Effluent Analytical Results - Fourth Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 54 11/13/01	Effluent Limits	Lab Reporting
pH	7.61	6-9	none
TSS	1.00	30	10
BOD	2.9	30	2
Arsenic	ND	50	3.4
Beryllium	0.89 B/	NE	0.2
Cadmium	ND	4.1	0.3
Manganese	21.0	NE	10
Mercury	ND	0.02 (w/DL = 0.64)	0.64
Selenium	ND	8.2	4.3
Thallium	ND	NE	5.7
Zinc	ND	411	1.2
Benzene	ND	5	0.5
Acetone	2,500	6,800	3
2-Butanone	ND	210	3
Chloromethane	ND	NE	0.5
1,4-Dichlorobenzene	ND	NE	0.5
1,1-Dichloroethane	ND	NE	0.5
cis-1,2-Dichloroethene	ND	70	0.5
Ethylbenzene	ND	34	0.5
Methylene chloride	3 B/	5	0.6
Tetrachloroethene	ND	5	0.5
Trichloroethene	ND	5	0.5
Vinyl chloride	ND	2	0.5
4-Methyl-2-pentanone	ND	15	3
bis (2-Chloroethyl) ether	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate	1.8 JB/	6	6
4 - Methylphenol	ND	34	10
Isophorone	ND	50	10
Pentachlorophenol	ND	1	1
PCB/Aroclor-1016	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Data has not yet been validated

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD5 data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Approved SW-846 method is incapable of achieving effluent limit.

Suffix Definitions:

/ = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

Q = Sample was analyzed out of the recommended holding time

R = Quality control indicates the data is not usable

JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias

U = Analyte is not detected at or above the indicated concentration

UB = Analyte is not detected at or above the indicated concentration due to blank contamination

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

**MWH**

MONTGOMERY WATSON HARZA

January 9, 2002

Kevin Adler
Remedial Project Manager
Region V, Mail Code SR-J6
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

✓
1/17/02
KA.

Sean Grady
Project Manager
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204

Re: Progress Report – December 2001 Activities
ACS NPL Site RD/RA

Dear Messrs. Adler and Grady:

This monthly progress report is for the Remedial Design and Remedial Action (RD/RA) activities at the American Chemical Services, Inc. (ACS) National Priority List (NPL) Site in Griffith, Indiana (Site). The report has been prepared in accordance with Paragraph 40 of the Consent Decree entered January 9, 2001; it covers the activities undertaken at the Site during the month of December 2001. The number and letter in parenthesis at the end of each heading provide a cross-reference to the remedial tasks listed in Appendix G of the Consent Decree.

CAPITAL COST ITEMS

Drum Removal in On-Site Containment Area (1.c.)

As reported in last month's progress report, Onyx Environmental Services shipped the final waste from the drum removal activities to Port Arthur, Texas for incineration on November 19, 2001. Onyx has confirmed that all material shipped to their Port Arthur facility for disposal was in conformance with the waste profiles that had been established. The majority of the destruction certificates have been received from Onyx, and the remainder continue to be received. No more activities are scheduled to occur on the site related to the drum removal. This item will be complete after receipt of the remaining destruction certificates and submittal of the construction completion report.

Groundwater Plume Treatment (1.e.)

The sixth round of groundwater sampling of the five piezometers which make up the South Area Oxygen Releasing Compound (ORC[®]) Pilot Study was conducted on November 29 and 30, 2001. This was the fifth and final round of sampling conducted after the ORC[®] application. Analytical results are attached to this report in Table 1. A final report will also be written, summarizing the analytical results and conclusions that can be drawn from the pilot study. The field work for the South Area Pilot Study is now complete and this section will be removed from future monthly progress reports until active work resumes. The summary report status will be listed under the Report Schedule at the end of this report.

In-Situ Vapor Extraction (ISVE) System for Off-Site Containment Area (2.a.)

Heritage Industrial Services (HIS) began pipe assembly on November 28, 2001 as reported last month. Pipe installation began the week of December 3, 2001 and was completed on December 26, 2001 for all 42 ISVE wells and 3 air sparge wells in the Off-Site Area. All wells were connected to the blower shed and trenches were backfilled. The majority of the backfilled clay has been compacted. Approximately half of the compacted clay has been tested and yielded passing results. Due to cold weather the remainder of the compaction and compaction testing will not be completed until the spring. This will not delay the startup of the ISVE system because all of the wells have already been connected, the piping has been pressure tested, and the surface seal has been restored. HIS demobilized from the site on December 27, 2001 and will return in the spring.

Fliteway Technologies was on site during the week of December 24, 2001 to complete remaining punchlist items for the blower shed. Punchlist items included the installation of sample ports and gauges for each ISVE well inside the blower shed. The blower unit arrived on site and was installed during the week of December 17, 2001. Since there is a long delivery time for such blowers, a second unit was ordered and has been delivered to the site as a backup unit.

The thermal oxidizer is scheduled to be delivered during the first part of February 2002. Ryan Construction is currently installing conveyance piping for the thermal oxidizer before it arrives on site. Austgen Electric is completing the installation plan for the control system for the ISVE system. Start-up of the ISVE system is currently scheduled to occur in February 2002.

Austgen will install communication cable connections between the blower shed and GWTP utilizing an intermediate cable pull box to be installed by Midwest Environmental, Inc.

Barrier Wall Extraction System (BWES) Upgrades (3.b.)

As mentioned in previous progress reports, Contract Dewatering Services (CDS) completed the re-installation of extraction well EW-20C during November 2001. Slusser Company restored the area around extraction well EW-20C with sod on December 4, 2001. CDS demobilized their remaining equipment during December 2001. With the completion of EW-20C and the installation of the permanent power source in the Off-Site Area, the BWES upgrade is complete. This item will be removed from future monthly status reports.

The status of the construction completion report will be listed in the Report Schedule at the end of this report.

Final Cover of Off-Site Area (5.d.)

During the completion of the Off-Site Area temporary cover in August and September 2001, KES also placed the final cover over all "non-engineered" areas of the Off-Site Area cover. The final cover will be placed on the engineered cover areas of the Off-Site Area after the operating ISVE system is determined to be complete.

PROJECT MANAGEMENT (6)

A copy of the updated construction schedule is attached. The current progress is shown on the attached schedule as a thick bar and the baseline schedule (as included in the Consent Decree) is shown as a thinner line located beneath the current progress bar.

Standing weekly meetings are scheduled for Thursdays at 10 a.m. unless the day or time needs to be changed to accommodate a participant whose attendance is necessary. During December 2001, weekly construction meetings were held on December 6, December 13, and December 20. The minutes from each meeting and the agenda for the next meeting are faxed to participants and the Agencies by the Tuesday following each meeting.

OPERATION & MAINTENANCE ITEMS

Treatment System Monitoring (B.1, 2, 3, 4)

The Groundwater Treatment Plant (GWTP) continued to operate as designed during December 2001. The GWTP resumed discharging to the wetlands on December 3, 2001 after a routine change-out of the carbon in the granular activated carbon (GAC) filters. The power to the Off-Site Area was turned off on December 3, 2001 to eliminate the potential for electrical hazards during the ISVE installation activities scheduled completed by HIS. Power was turned on again in the Off-Site Area on December 12, 2001, and the Off-Site Area extraction wells resumed pumping on December 14, 2001. The three On-Site Barrier Wall Extraction System (BWES) wells (EW-10, EW-17, EW-18), five of the Off-Site BWES wells (EW-11, EW-19, EW-20, EW-20B, EW-20C), and the Perimeter Groundwater Extraction System (PGCS) are currently bringing influent to the GWTP. The GWTP continues to discharge through wetlands discharge structures 2 and 3.

The monthly effluent compliance sample for the GWTP was collected on December 19, 2001. A summary of the analytical data for this sample is attached as Table 2.2. No exceedances were reported. The final validated data will be included in the Groundwater Treatment Plant Quarterly Report, Fourth Quarter 2001.

As a contingency to provide extra dewatering capacity for the On-Site Area now that the Fire Pond has been closed, the construction of an additional extraction point is being evaluated. If constructed, this extraction point would be available for short-term

groundwater level control of the On-Site Area. Continued monitoring of the water level in the On-Site Area will determine the need for the extra capacity.

Groundwater, Air Quality, Wetland, and Monitoring (B.7)

As reported last month, a meeting was held on November 29, 2001 between the U.S. EPA, IDEM, MWH, and Black & Veatch to discuss the revised Long-Term Groundwater Monitoring Plan that had been proposed by MWH. As a result of the meeting, the next round of groundwater monitoring is scheduled for March 2002. MWH has submitted written responses to the Agency review comments to the U.S. EPA and IDEM on December 27, 2001.

Residential Well Water Quality Monitoring (B.8.)

The next annual round of residential well sampling is tentatively scheduled for September 2002.

REPORT SCHEDULE

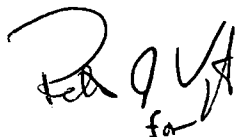
This section summarizes reports that are in progress or have recently been submitted to the U.S. EPA and IDEM.

- **Drum Removal in On-Site Containment Area (1.c.)** – the Construction Completion Report is in progress
- **PCB Sediment Excavation from Wetland (1.d.)** - the Construction Completion Report is in progress
- **Barrier Wall Extraction System (BWES) Upgrades (3.b.)** – the Construction Completion Report is in progress
- **Separation Barrier Wall Between On-Site and Off-Site Areas (4.a.)** – the Construction Completion Report was submitted to the Agencies on December 18, 2001. This heading will be removed from future reports. } *Check BVSA review.*
- **Temporary Engineered Cover of Off-Site Area (5.a.)** – the Construction Completion Report is in progress
- **Treatment System Monitoring (B.1, 2, 3, 4)** – the Groundwater Treatment Plant Quarterly Report, Second Quarter 2001 was submitted to the Agencies on December 3, 2001.
- **Groundwater, Air Quality, Wetland, and Monitoring (B.7)** – the September 2001 Groundwater Monitoring Quarterly Report will be submitted to the Agencies during January 2002.

The next monthly report will be forwarded to U.S. EPA and IDEM by February 11, 2001. If you have questions on the information provided in this monthly report, please contact me at (303) 410-4000.

Sincerely,

MWH



Joseph D. Adams, Jr., P.E.
Project Coordinator

Enclosures:

Updated Schedule of Remedial Activities

Table 1 – ORC® South Area Analytical Results for November 2001

Table 2.2 – Summary of Effluent Analytical Results for December 19, 2001

cc: FILE

Barbara Magel – Karaganis White & Magel, Ltd.

Mark Travers – Environ

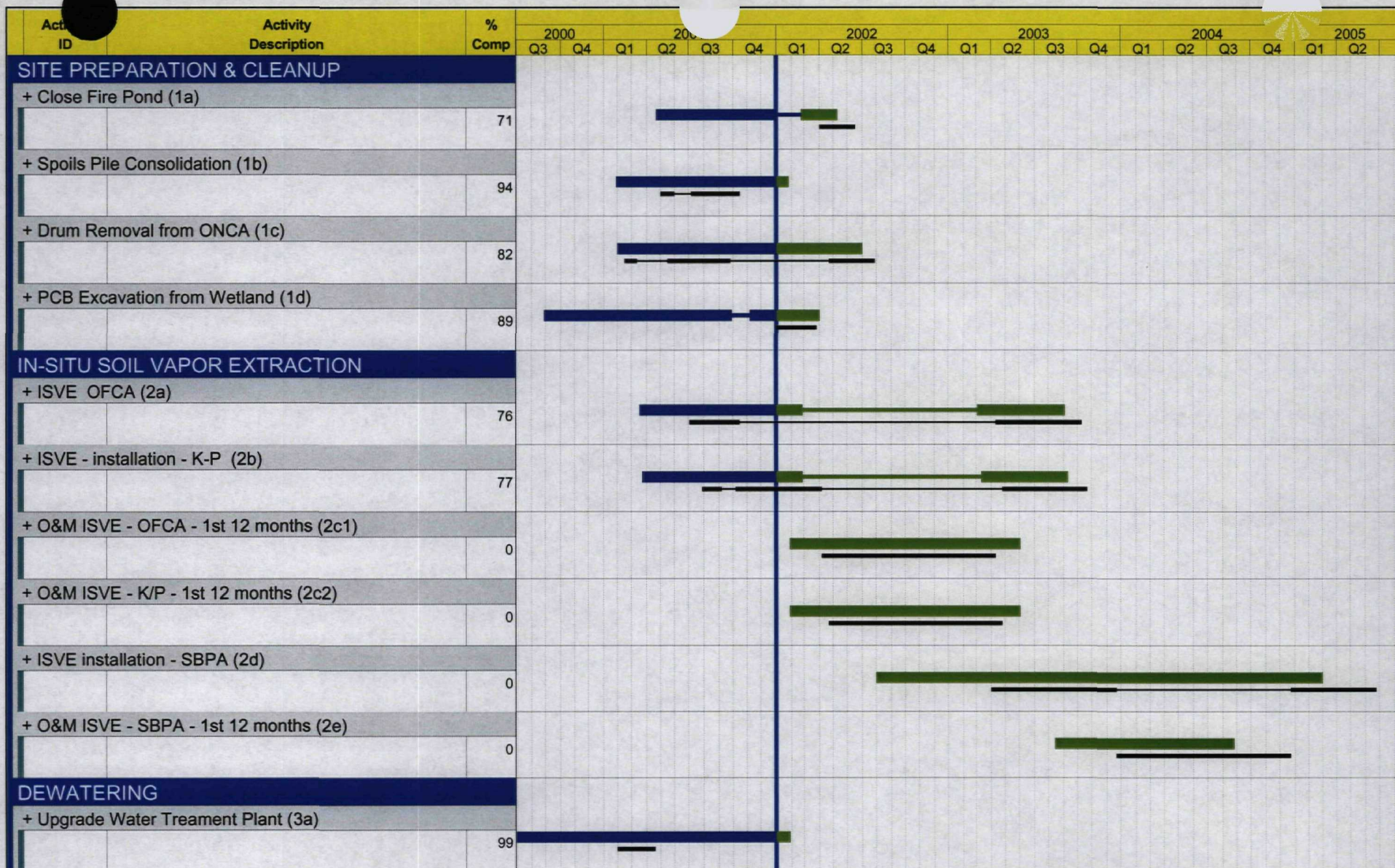
Larry Campbell – Black & Veatch

Rob Adams – MWH

Pete Vagt – MWH

Travis Klingforth – MWH

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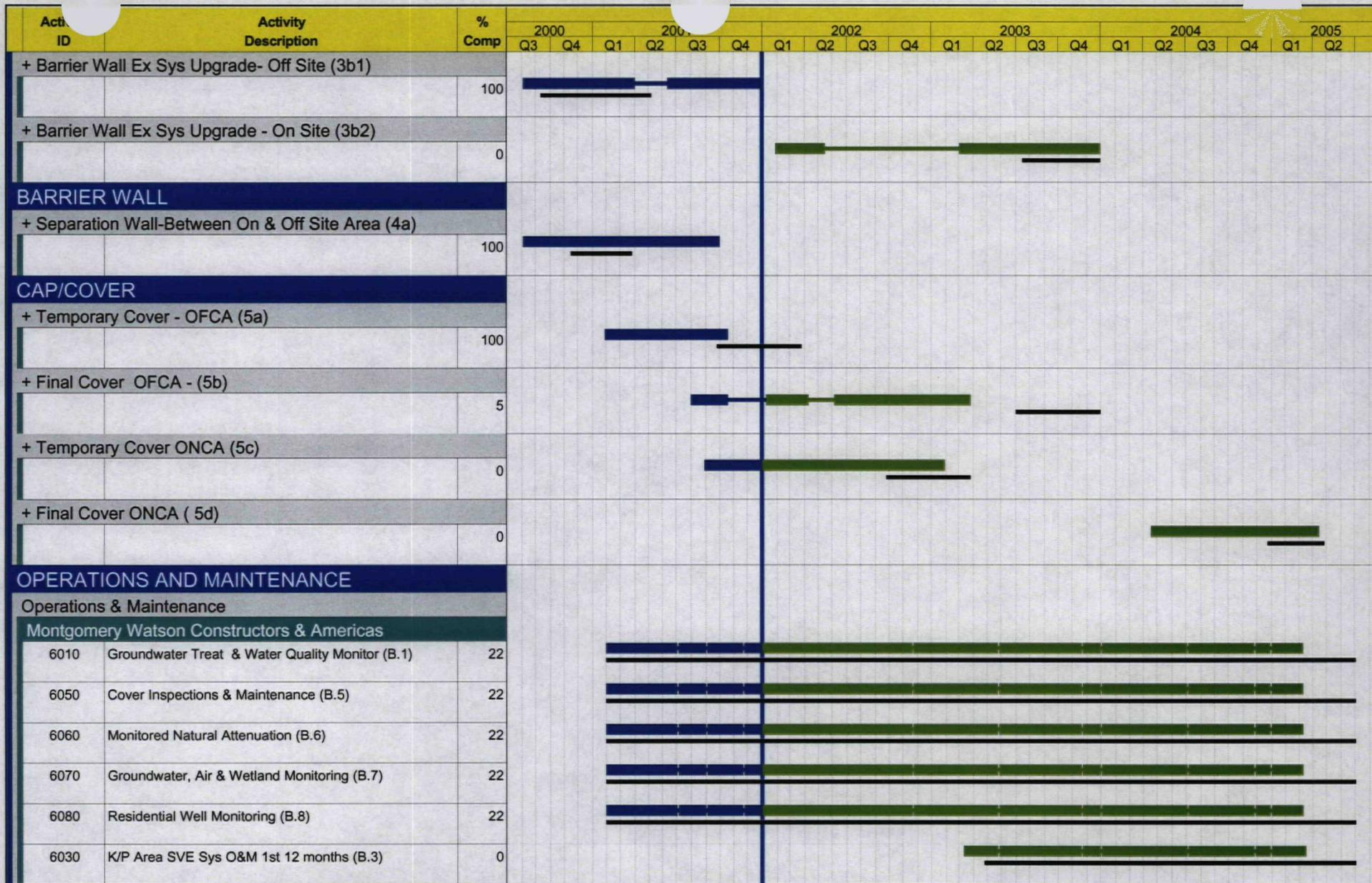
Data Date 31DEC01
Run Date 04JAN02 13:04

Early Bar
Target 1
Progress Bar
Critical Activity

ACSL
ACS NPL SITE REMEDIAL ACTION
Current Progress (Bar)
vs
CD Schedule (line)
End of December 2001 Report

Sheet 1 of 3





Data Date 31DEC01
Run Date 04JAN02 13:04

Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACSL

ACS NPL SITE REMEDIAL ACTION

Sheet 2 of 3

Current Progress (Bar)
vs
CD Schedule (line)

End of December 2001 Report



Act. ID	Activity Description	% Comp	2000		2001		2002		2003		2004		2005	
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
6020	OFCA SVE Sys O&M 1st 12 months (B.2)	0												
6040	SBPA SVE Sys O&M after 1st 12 months (B.4)	0												
+ Montgomery Watson Americas														
		26												
MANAGEMENT														
+ MWA Management														
		31												

Data Date 31DEC01
Run Date 04JAN02 13:04

 Early Bar
 Target 1
 Progress Bar
 Critical Activity

ACSL

ACS NPL SITE REMEDIAL ACTION

Sheet 3 of 3

Current Progress (Bar)
vs
CD Schedule (line)

End of December 2001 Report



Table 1
ORC South Area Analytical Results
ACS NPL Site

baseline						
ORCPZ101	Apr-01	May-01	Jun-01	Jul-01	Sep-01	Nov-01
Acetone					7 J	7 J
Benzene	410	200	180	530	910 D	810 D
Chloroethane	56	26 J	27	120	140	150
Chlorobenzene			3 J		5 J	
Ethylbenzene	460	190	150	220	150	93
Methylene Chloride	8 J				2 J	2 J
Isopropylbenzene	21 J	17 J	20	32 J	48	46
cis-1,2-Dichloroethene						0.7 J
trans-1,2-Dichloroethene			0.9 J		4 J	6 J
1,2-Dichlorobenzene			2 J		6 J	5 J
Xylene	3100 E	1100	1400 D	3400	4000 DE	2400 D
ORCPZ102	Apr-01	May-01	Jun-01	Jul-01	Sep-01	Nov-01
Acetone					6 J	9 J
Benzene	650	290	93	6000	6200 D	7200 D
Chlorobenzene					6 J	7 J
Chloroethane	200	99	65	580	370 D	500 DJ
Cyclohexane					4 J	6 J
Ethylbenzene	16 J	4 J		53 J	98	110
Methylene Chloride	18 J				4 J	4 J
Methylcyclohexane						0.5 J
Isopropylbenzene					13	13
Toluene					1 J	2 J
trans-1,2-Dichloroethene			2 J		11	9 J
1,4-Dichlorobenzene					3 J	3 J
1,2-Dichlorobenzene					16	16
Xylene	310	28		810	1600 D	2100 D
ORCPZ103	Apr-01	May-01	Jun-01	Jul-01	Sep-01	Nov-01
Benzene	800				58	220 D
Chloroethane	73				34	67
Ethylbenzene	14 J					1 J
Methylene Chloride	12 J					
Isopropylbenzene						
Xylene	470					12
ORCPZ104	Apr-01	May-01	Jun-01	Jul-01	Sep-01	Nov-01
Acetone					6 J	
Benzene	5 J		75	41		
Chloroethane	5 J		8 J	5 J		
Chlorobenzene			4 J	4 J		
Ethylbenzene				1 J		
Methylene Chloride	1 J					
Isopropylbenzene						
Xylene	50	1 J	51	14		
ORCPZ105	Apr-01	May-01	Jun-01	Jul-01	Sep-01	Nov-01
Benzene	590	340	380	290 J	280 D	370 DJ
Chlorobenzene	68	61 J	59		46	46
Chloroethane	130	38 J	88		160	130
Cyclohexane			14 J		14	15
1,1-Dichloroethane		37 J	44 J		11	
1,2-Dichlorobenzene	12 J	37 J	49 J		71	49
1,3-Dichlorobenzene					4 J	3 J
1,4-Dichlorobenzene	49 J		12 J		16	12
1,2-Dichloropropane					3 J	2 J
Ethylbenzene	3100 E	2300	2600 D	2700	2000 DE	2700 D
Methylene Chloride	9 J					
Methylcyclohexane	28 J	35 J	57	32 J	56	71
4-Methyl-2-Pentanone		19 J				
Isopropylbenzene	58	63 J	87	65 J	120	96
Toluene	63	180	240	310 J	220 E	100
1,1,1-Trichloroethane			7 J		0.9 J	
1,2,4-Trichlorobenzene					2 J	
Xylene	17000 E	8200	13000 D	14000	6900 DE	12000 D

xylene probably higher in 105 during 09/01

Notes:

All concentrations in ug/L

Blank cells indicate parameter was not detected above detection limits

J - Indicates an estimated concentration. Analyte was detected below reporting limits.

D - Sample was diluted

E - Analyte concentration exceeded upper calibration limits of instrument.

Due to lab error, sample was not diluted and re-run.

Table 2.2
Summary of Effluent Analytical Results - Fourth Quarter 2001
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

	Event Date	Month 55 12/19/01	Effluent Limits	Lab Reporting
pH		6.93	6-9	none
TSS		10.0	30	10
BOD		25	30	2
Arsenic		ND	50	3.4
Beryllium		ND	NE	0.2
Cadmium		ND	4.1	0.3
Manganese		193	NE	10
Mercury		ND	0.02 (w/DL = 0.64)	0.64
Selenium		2.8 B/	8.2	4.3
Thallium		ND	NE	5.7
Zinc		11.3 B/	411	1.2
Benzene		ND	5	0.5
Acetone		240	6,800	3
2-Butanone		10 J/	210	3
Chloromethane		ND	NE	0.5
1,4-Dichlorobenzene		ND	NE	0.5
1,1-Dichloroethane		ND	NE	0.5
cis-1,2-Dichloroethene		ND	70	0.5
Ethylbenzene		ND	34	0.5
Methylene chloride		1 J/	5	0.6
Tetrachloroethene		ND	5	0.5
Trichloroethene		ND	5	0.5
Vinyl chloride		ND	2	0.5
4-Methyl-2-pentanone		ND	15	3
bis (2-Chloroethyl) ether		ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate		ND	6	6
4 - Methylphenol		ND	34	10
Isophorone		ND	50	10
Pentachlorophenol		0.061 J/	1	1
PCB/Aroclor-1016		ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
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U = Analyte is not detected at or above the indicated concentration

UB = Analyte is not detected at or above the indicated concentration due to blank contamination

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

D = Result obtained after diluting sample